

LET Do IT: An Online Licensure Examination for Teachers Reviewer with Performance Analytics

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ABSTRACT

Low passing rates in the Licensure Examination for Teachers (LET) continue to pose challenges for aspiring educators in the Philippines, highlighting the need for accessible, data-driven review support systems. This study presents the design, development, and evaluation of LET do IT, a web-based online LET reviewer integrated with performance analytics to support structured exam preparation and self-regulated learning. Developed using the Agile-Scrum methodology, the system incorporates a question bank, customizable mock examinations, and rule-based performance analytics that classify learner performance into interpretable categories to guide focused remediation. System evaluation involved a User Acceptance Test with 43 education students based on the Technology Acceptance Model and a software quality assessment by seven IT professionals using the ISO/IEC 25010 standard. Results indicate high user acceptance (overall mean = 4.58, Strongly Agree) and favorable software quality ratings (overall mean = 4.48, Agree), particularly in reliability, functional suitability, and compatibility. Findings suggest that integrating transparent performance analytics into online review platforms can enhance learners' awareness of strengths and weaknesses and support exam readiness. While direct LET outcomes were not measured, the study demonstrates the system's potential as a scalable and cost-effective digital review solution. Future research should include longitudinal studies with larger and more diverse populations to examine its impact on actual licensure examination performance.

Keywords: Online Review System, Performance Analytics, Rule-Based Classification, Agile Scrum, Licensure Examination for Teachers, Learning Analytics

INTRODUCTION

Performance analytics is the methodical assessment of student performance through data analysis tools, which can significantly impact educational outcomes, such as exam scores. [1] Institutions may employ various statistical and machine learning techniques to identify factors influencing performance and tailor interventions accordingly. It provides data that helps refine programs and guides individuals in modifying their practices, thereby improving their outcomes through targeted interventions. [2] Educational websites gradually use performance analytics to improve learning outcomes and tailor educational experiences to individual needs. By using the data these websites acquire, these platforms can offer insights into student engagement, forecast academic performance, and enable prompt interventions. [3]

With the use of performance analytics in educational systems, rule-based classification serves as a transparent and interpretable approach for categorizing learner performance using predefined logical rules and threshold conditions. This method allows the systematic evaluation of examinees' assessment results by classifying performance into meaningful levels. [4] Unlike complex predictive models, rule-based classification emphasizes clarity and comprehensibility, enabling reviewees to easily understand feedback and take appropriate corrective actions. [5]

The Professional Regulation Commission (PRC) is the licensing and regulatory agency of the Philippine national government for the practice of regulated professions. It was created as a national government agency by Presidential Decree (P.D.) No. 223, dated June 22, 1973, signed by President Ferdinand E. Marcos, mandated

the enforcement of the laws regulating the various professions. It was previously called the Office of the Board of Examiners, created by Republic Act No. 546 on June 17, 1950, under the aegis of the Civil Service Commission. The Professional Regulation Commission (PRC) performs two essential functions, which are: 1) to conduct and administer Licensure Examinations to aspiring professionals and 2) to regulate and supervise the practice of the professions exercised in partnership with the forty-six (46) Professional Regulatory Boards (PRBs) in the fields of health, business, education, social sciences, engineering, and technology. The PRBs govern their respective professions' practices and ethical standards and accredit the professional organizations representing the professionals. Board examination performance is regarded as an indicator for assessing program quality. A high first-attempt passing rate effectively indicates program quality. Aspiring educators must overcome various obstacles to get and retain a teaching certificate, including passing the Licensure Examination for Teachers (LET). The LET evaluates aspiring educators' extensive knowledge and proficiency, creating a reliable system for assessing their practice and promoting continuous professional advancement. Licensing is essential to ensure that only qualified educators are hired. This generates concern among candidates and educational institutions that cultivate future educators with varied specializations. The LET stimulates competitiveness since it represents future employment, salary improvement, and advancement in rank. Undeniably, passing the LET is the primary criterion that the Department of Education (Dep. Ed.) established for all teacher education graduates to become professionals.

Given the significance of the Licensure Examination for Teachers (LET), Teacher Education Institutions (TEIs) must excel in the board exam. Consequently, TEIs perform curricular evaluations, revise course syllabi, and enforce rigorous entrance and retention standards. Teacher Education Institutions conduct thorough pre-board review programs to prepare teacher education students for the LET. These programs are course audits intended to replicate the board examination that prospective graduates must complete. The results of the LET show that dwindling numbers of candidates meet the minimum qualifications for teachers.

Figure 1 below, showed that since 2009, the pass rate for the LET has been approximately 28%. Elementary LET passing rates since 2009 have ranged from 18% in 2010 to 48% in 2012. Secondary LET passing rates are similar, ranging from 26% to 48% and averaging 37%.

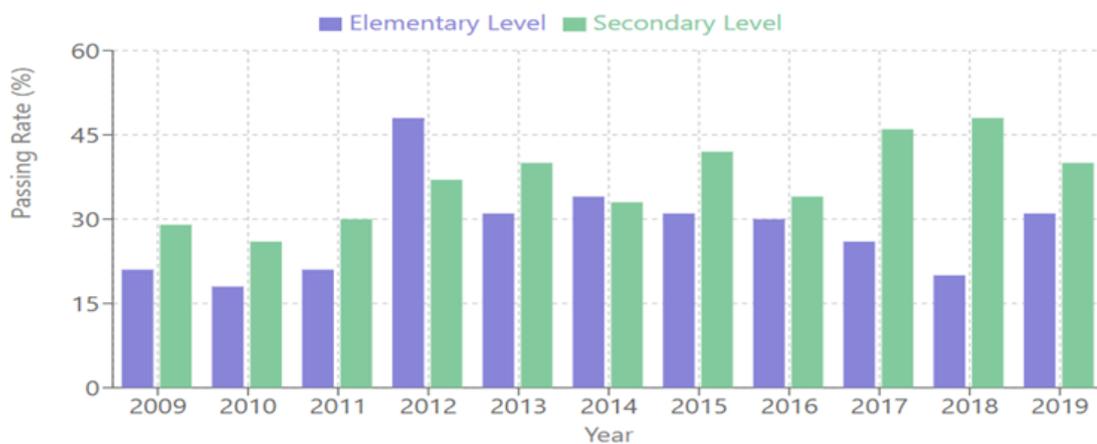


Figure 1. LET Elementary and Secondary Passing Rates (2009-2019)

Examinees faced several challenges in their LET preparation, such as time constraints and an emphasis on primary subjects within their major, which hindered comprehensive discussion or exploration of themes. This problem is exacerbated by several factors, such as the teacher's lack of subject-matter expertise, ineffective teaching strategies, and a lack of background knowledge and information. Additionally, economic hardships may affect access to essential resources for board exam preparation and could intensify stress and difficulties during an already challenging phase in the respondent's life. Moreover, the lack of exam preparation significantly affected students' test anxiety and academic achievement. Research indicates that test anxiety is frequently associated with students' grievances regarding insufficient time to prepare for examinations or study course content. Furthermore, Institutional support for board exam preparation is inadequate. In line with this, some studies have stated that examinees endorse supplementary efforts to improve student readiness, demonstrating a

proactive approach to enhancing the quality of exam preparation. Effective time management, discipline, and staff commitment are essential characteristics that leaders must contribute to successfully achieve corporate objectives, including assisting graduates in passing the examination.

Despite the low passing percentage, some examinees succeeded and even excel. Some studies suggested that participation in LET review classes positively impacted success in the LET. Other researchers have suggested reassessing the regulations governing teacher education programs, specifically regarding entry and retention criteria, faculty dedication, and the administration of review sessions and mock board examinations. For teacher education graduates, most prepare to take the board examination and enroll in review classes. Many graduates temporarily disengage from academic activities and defer their board examination preparation, which can potentially impact their subsequent performance. The interval between examinations or delays in preparation activities may adversely affect the retention of pertinent learned information. Participating in review classes necessitates both time and financial resources, and review materials are expensive. The timetable for review classes requires a massive portion of the reviewee's time.

Studies recommend that implementing an innovative review system will help students who use technology acquire the skills necessary to take the Licensure Examination for Teachers (LET). The cognitive abilities of students are enhanced due to the effective integration of technology in education, which addresses the requirements of the students.

The researchers proposed a system named "LET do IT: An Online Licensure Examination for Teachers Reviewer with Performance Analytics," which offers an interactive platform that delivers comprehensive and organized learning resources, including subject-specific modules, practice assessments, and performance monitoring for education students and graduates.

Related Studies

Based on several local reports, the Philippines' average national pass rate for the Licensure Examination for Teachers (LET) over the past decade has ranged from 35 to 43 percent. These reports highlight the difficulties examinees encounter, such as insufficient time for preparation, scarce resources, and financial difficulties that limit their access to high-quality review materials. According to a cost analysis by Lacambra, many examinees from low-income and rural areas cannot afford the high costs of traditional review centers, which include fees, lodging, transportation, and printed materials. These difficulties necessitated the development of more accessible and reasonably priced substitutes. [6] [7] [8]

The preparation for the Licensure Examination for Teachers (LET) in the Philippines identifies substantial obstacles encountered by examinees and educational institutions. Local studies and literature highlight that, despite the presence of traditional and online review techniques, numerous candidates have difficulties owing to inadequate preparation time, financial limitations, and insufficient access to quality review resources. Expenses related to conventional review centers, encompassing fees, transportation, meals, and lodging, provide significant obstacles, particularly for candidates from low-income and remote regions. Conversely, online review platforms provide more economical and adaptable options, although frequently lack the interactive functionalities and performance metrics essential for effectively improving learning outcomes. [9]

Empirical evidence indicates that engagement in review classes, whether conducted online or in-person, is favorably associated with increased LET passing rates. Nonetheless, deficiencies persist in the incorporation of technology-driven interventions that offer systematic feedback, personalized learning, and instantaneous performance monitoring. The majority of current online reviewers lack extensive analytics and individualized feedback systems, hence diminishing their efficacy. The lack of formal certification for online review centers by CHED or PRC undermines their legitimacy, leading to dependence on expensive private review centers. [10] [11] [12] [13]

Foreign literature and studies support the efficacy of online and blended learning formats when designed with interactive and learner-centered methodologies, aligning with constructivist and self-regulated learning theories. These methodologies promote enhanced engagement and autonomy, essential for understanding intricate subjects such as the LET. Research emphasize the significance of performance analytics in digital learning

environments as instruments for tracking progress, identifying deficiencies, and delivering customized interventions that improve student outcomes. [14] [15] [16]

The proposed system mitigates these deficiencies by providing an accessible, cost-effective, and interactive online reviewer featuring modules for practice tests, mock examinations, user performance monitoring, and administrative oversight. This system incorporates performance analytics to facilitate self-regulated learning, allowing examinees to track their progress over time and concentrate on areas requiring enhancement.

In conclusion, while conventional review centers are still beneficial, the advancement of technology-enhanced learning platforms featuring integrated performance analytics presents considerable potential for enhancing LET success rates and overall educational results in the Philippines. Subsequent research must concentrate on thorough assessments of these systems to determine their effectiveness, advance accreditation criteria, and enable integration within Teacher Education Institutions.

DESIGN AND METHODOLOGY

Methodology

The researchers utilized the Agile Methodology with a Scrum framework to develop the proposed system. It is a process framework applied to oversee product development and various knowledge-based tasks. Scrum is empirical as it enables teams to formulate a hypothesis on functionality, implement it, reflect on the outcomes, and make necessary modifications. Scrum is organized to enable teams to integrate practices from other frameworks relevant to their needs. This methodology is most effective when a cross-functional team operates in a product development environment with a substantial workload that is amenable to division into multiple 2- to 4-week iterations.

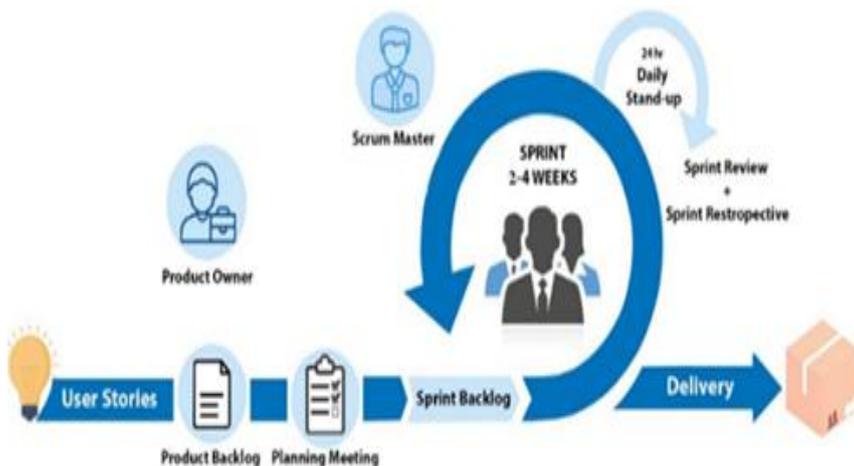


Figure 2. Agile Methodology with a Scrum Framework

To support meaningful interpretation of examination and learning data, the system employed a Descriptive and Predictive Analytics Method integrated within the Agile–Scrum development process. This method focuses on collecting, processing, and analyzing user assessment data to generate actionable insights for both examinees and administrators.

1) User Stories

User stories are short, descriptive statements used to convey the website's functionality from the user's perspective. The team will develop features gathered from the following user stories:

2) Product Backlog

The system has two developers: the front end and the backend. Both of the developer and also the scrum team brainstormed and listed the product modules: Question Bank, User Registration, Subscription Plan, Pre-test,

Mock Examination, Exam Result, and Dashboard for both admin and user, which includes user performance analytics and user demographics for admin.

3) Sprint Planning/Meeting

In this phase, the Scrum team selects items from the Product Backlog to work on during the Sprint and define the Sprint Goal.

4) Sprint Backlog

The team creates a sprint backlog, a list of tasks and backlog items chosen for the current sprint. This work decomposition enables the development team to monitor progress more efficiently.

5) Sprints

It is a short, fixed period—usually two to four weeks—where a specific set of work is planned and completed. It is like a mini-project inside a larger project. During each sprint, the team works together to complete tasks or features from a list called the product backlog.

6) Daily Stand-up Meeting

The development team conducted a daily short meeting to plan out and monitor the progress. This also happened during the iteration, when the team communicates to plan the solution to a problem and the next step for the next iteration's improvement. This meeting will facilitate clear communication, clarify work status, and enable informed decision-making.

7) Review

During this phase, it is actually conducted inside every sprint, and the team conducts a sprint review meeting to evaluate the completed work increment and collect feedback from stakeholders. This evaluation will assist the team in assessing sprint efficacy and ensuring the work fits with the objectives. Should the sprint backlog remain unfulfilled, the development team will analyze the underlying causes and work together to resolve the issue. The unfinished sprint backlog will revert to the product backlog and be re-prioritized for subsequent Sprints.

8) Retrospective

In this phase, usually conducted at the end of each iteration sprint, the development team holds a sprint retrospective meeting to evaluate the preceding sprint. The team conducts a brainstorming session to identify areas for improvement and other factors that could enhance their efficacy. This discussion establishes a strategy for executing those enhancements in the next sprint.

9) Delivery

This phase determined whether the backlog items addressed during the sprint can be marked as accomplished and then removed from the product backlog. The development team sets the criteria that must be fulfilled for a product backlog item, feature, or work increment to be deemed complete and releasable. Upon delivery, the proponents evaluated the deliverables and either accept or reject them according to established acceptance criteria. This procedure is reiterated throughout the project, enabling immediate feedback and continuous improvement.

Rule-based Performance Analytics

The system employs a rule-based classification method to evaluate user performance based on average percentage scores per subject. Threshold values were defined as follows: scores of 80% and above indicate Strength, scores between 60% and 79.99% indicate Moderate performance, and scores below 60% indicate Weakness. These thresholds align with commonly accepted academic grading standards in Philippine higher education.

Rule-based classification was selected due to its transparency, interpretability, and suitability for formative feedback. This approach enables users to clearly understand how performance categories are derived and why specific recommendations are generated, supporting reflective and self-regulated learning.

$$C(S_i) = \begin{cases} \text{Strength, if } S_i \geq 80 \\ \text{Moderate, if } 60 \leq S_i < 80 \\ \text{Weakness, if } S_i < 60 \end{cases}$$

The classification function $C(S_i)$ is a piecewise threshold-based formula used to categorize a user's performance in each subject, where S_i is the average percentage score. Subjects with scores of 80% or higher are classified as Strengths, indicating strong performance, scores between 60% and 79.99% are Moderate, showing adequate performance with room for improvement, and scores below 60% are Weaknesses, prioritized in the system's recommendations. This formula transforms numerical scores into meaningful categories, enabling the system to provide transparent, interpretable, and actionable guidance without relying on complex machine learning models.

$$S_i = \frac{1}{n} \sum_{k=1}^n \left(\frac{\text{Score}_{ik}}{\text{TotalQuestions}_{ik}} \times 100 \right)$$

The formula calculates the average percentage score of a user in subject i . Where n is the number of exams, Score_{ik} is the score in exam k , and $\text{TotalQuestion}_{ik}$ is the total questions in that exam. Each exam score is converted to a percentage, and the average across all exams gives S_i , which is then used in the classification function to determine whether the subject is a Strength, Moderate, or Weakness.

In the system, the rule-based logic algorithm is implemented using conditional (if-else) statements. When a user's exam data is retrieved, the system calculates the average score for each subject and applies the threshold-based classification function $C(S_i)$ to categorize subjects as Strengths, Moderate, or Weaknesses. Subjects identified as Weaknesses are prioritized in the recommendation output, while Strengths and Moderate subjects are displayed to inform users of their overall performance. By applying this algorithm, the system provides personalized and actionable guidance, helping users focus on areas that require improvement while maintaining transparency and interpretability in its recommendations.

Conceptual Framework

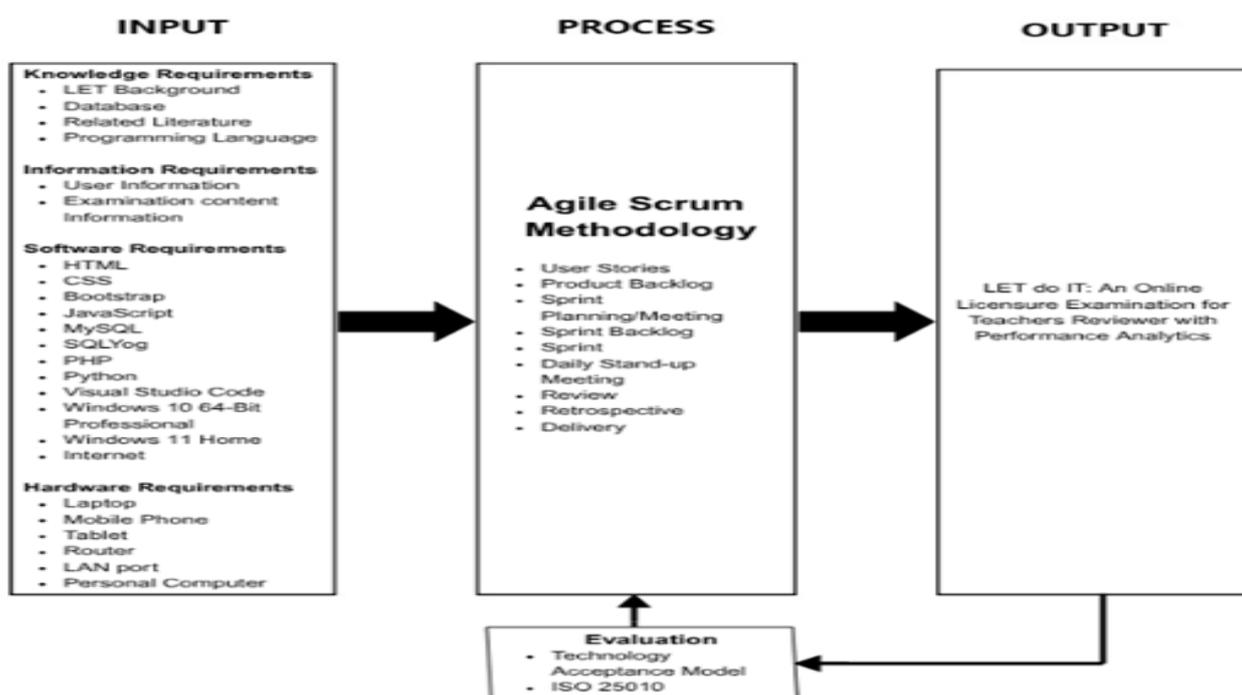


Figure 4. Input-Process-Output Diagram of the Project

Figure 3 presents a conceptual framework for developing the capstone project. In the input phase, essential resources are gathered, including knowledge of the Licensure Examination for Teachers (LET), databases, related literature, and programming skills. Required software includes HTML, CSS, JavaScript, PHP, Python, MySQL, SQLYog, Visual Studio Code, Windows 10 64-Bit Professional, Windows 11 Home, and Internet while hardware needs include laptops, tablets, mobile phones, routers, LAN port, and desktop computers, all of which collectively support the design, development, testing, and deployment of the proposed system.

The process phase uses Agile Scrum practices, starting with user stories and a product backlog. Development occurred in sprints, with planning meetings, daily stand-ups, reviews, retrospectives, and product deliveries. Continuous evaluation ensures refinement and improvement. In the output phase, the final product is an online LET reviewer platform with performance analytics, helped aspiring teachers prepare effectively and monitor their progress using data-driven insights.

System Architecture

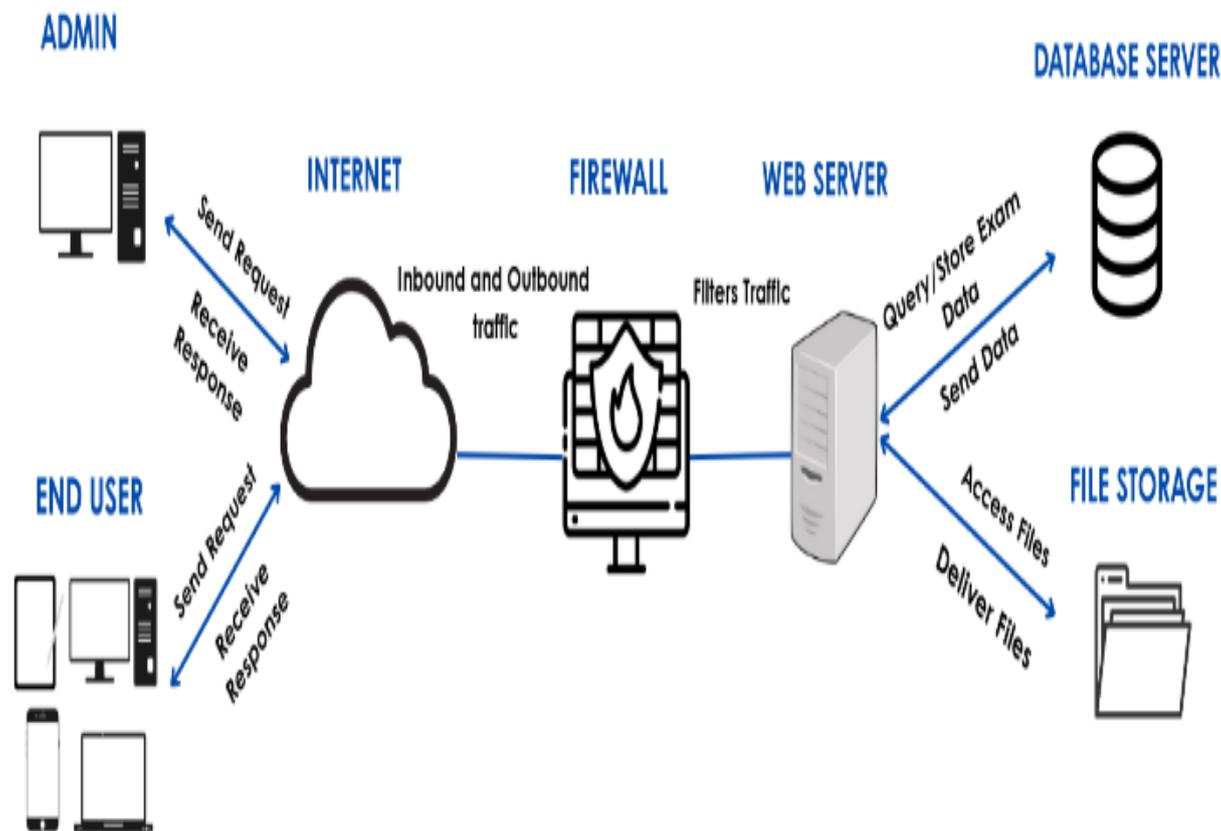


Figure 5. Sytem Architecture

The system adopts a client–server architecture accessible through web browsers on multiple devices. User requests are processed through secure server-side components that manage authentication, assessment logic, analytics computation, and data storage. Performance analytics are presented through dashboards using visual indicators to facilitate interpretation of learning progress.

Technical Background

LET do IT: An Online Licensure Examination for Teachers Reviewer with Performance Analytics offers an interactive platform that delivers comprehensive and organized learning resources, including subject-specific

modules, practice assessments, and performance monitoring for education students and graduates. To develop the system, the following tools, technologies, and materials will be utilized:



Figure 6. Applications and Technologies to be used

HTML 5.3 2020: The researchers used HTML to achieve a clean and organized layout that guides users through each section flawlessly. Through HTML's framework, the system offers a user-friendly experience that supports learners in navigating and interacting with the review tools efficiently.

CSS3 2011: plays a vital role in shaping the look and feel of the system. It adds elements that make the interface both engaging and user-friendly. By using CSS3, the system achieves a clean, modern, and professional appearance that significantly enhances readability and overall usability.

JavaScript Es6 2015: a versatile, object-oriented programming language widely used to add interactivity to web browsers. It plays a key role in making the platform dynamic and user-friendly. By integrating these interactive elements, JavaScript helps create a flawless and engaging experience.

PHP 8.4.3: a widely used server-side scripting language designed specifically for web development. Server-side scripting means that PHP runs on the web server, handling tasks that create customized responses for each user's request by handling these core functions smoothly, maintaining the system's reliability and responsiveness.

Python 14.0: a programming language that is rich in mathematical library and graphing that were used in the performance analytics of the user and clustering for the admin side.

Bootstrap V5.1.3: a free, open-source front-end development framework designed to simplify the creation of responsive, mobile-first websites and web applications. Its extensive library of pre-designed components, including navigation bars, buttons, modals, and exam-related UI elements, streamlines the development process while maintaining a professional and polished look.

MySQL 8.0.41 2025: an open-source relational database management system based on structured query language. MySQL is employed to store and manage user data, guaranteeing its secure and organized retrieval.

SQLyog 8.55: a Graphical User Interface (GUI) tool. This is where the designated database is created and imported to the server computer. SQLyog is employed by developers to efficiently manage databases, simplifying database maintenance and debugging.

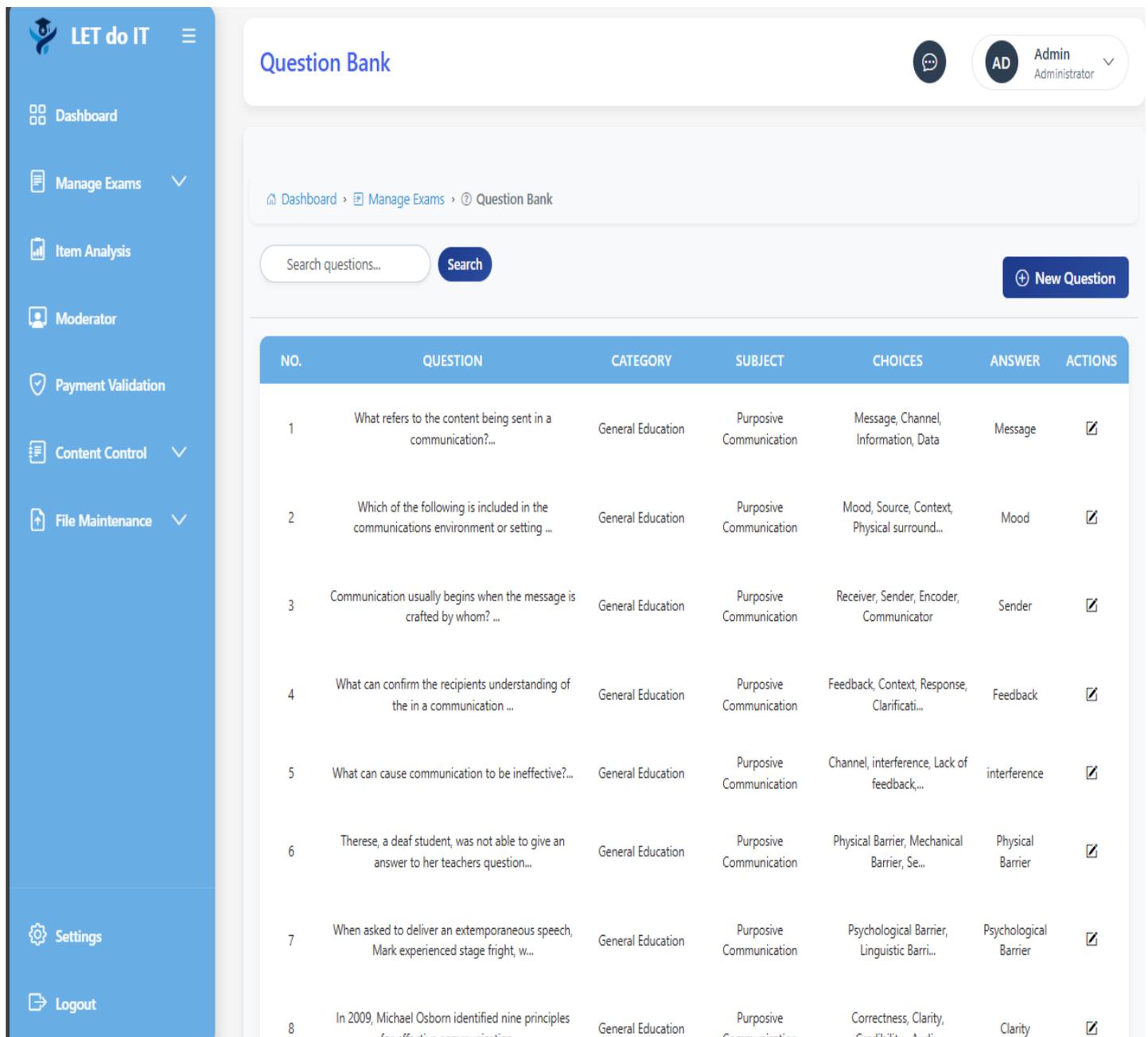
Visual Studio Code 1.8.7.1: a powerful and lightweight code editor. It includes syntax highlighting, Git integration, debugging, and extensions for various programming languages. This platform will be used to create the website and as an IDE.

Apache Web Server: A free, open-source software that delivers web content over the internet by processing requests from browsers, acting as the crucial link between website files and users, and offering powerful features like security (HTTPS), scalability, and flexible configuration through modules and .htaccess files, making it suitable for everything from small sites to large applications.

RESULT AND DISCUSSION

System Features and Learning Support

The Online LET Reviewer is a comprehensive web-based system designed to aid education students and graduates in their preparation for the Licensure Examination for Teachers (LET). It functions as a novel digital platform that offers accessible, structured, and interactive resources for review and self-assessment. The system uses a combination of HTML, CSS, JavaScript, Bootstrap, and Python for the front-end interface, while PHP and MySQL are used for back-end development and database management. The system is integrated with SQLyog for effective database management. It is hosted on an Apache server using XAMPP, ensuring stability, interoperability, and ease of deployment across multiple operating systems.



NO.	QUESTION	CATEGORY	SUBJECT	CHOICES	ANSWER	ACTIONS
1	What refers to the content being sent in a communication?...	General Education	Purposive Communication	Message, Channel, Information, Data	Message	<input checked="" type="checkbox"/>
2	Which of the following is included in the communications environment or setting ...	General Education	Purposive Communication	Mood, Source, Context, Physical surround...	Mood	<input checked="" type="checkbox"/>
3	Communication usually begins when the message is crafted by whom? ...	General Education	Purposive Communication	Receiver, Sender, Encoder, Communicator	Sender	<input checked="" type="checkbox"/>
4	What can confirm the recipients understanding of the in a communication ...	General Education	Purposive Communication	Feedback, Context, Response, Clarificati...	Feedback	<input checked="" type="checkbox"/>
5	What can cause communication to be ineffective?...	General Education	Purposive Communication	Channel, interference, Lack of feedback,...	interference	<input checked="" type="checkbox"/>
6	Therese, a deaf student, was not able to give an answer to her teachers question...	General Education	Purposive Communication	Physical Barrier, Mechanical Barrier, Se...	Physical Barrier	<input checked="" type="checkbox"/>
7	When asked to deliver an extemporaneous speech, Mark experienced stage fright, w...	General Education	Purposive Communication	Psychological Barrier, Linguistic Barri...	Psychological Barrier	<input checked="" type="checkbox"/>
8	In 2009, Michael Osborn identified nine principles for effective communication. ...	General Education	Purposive Communication	Correctness, Clarity, Credibility Audi...	Clarity	<input checked="" type="checkbox"/>

Figure 7. Question Bank

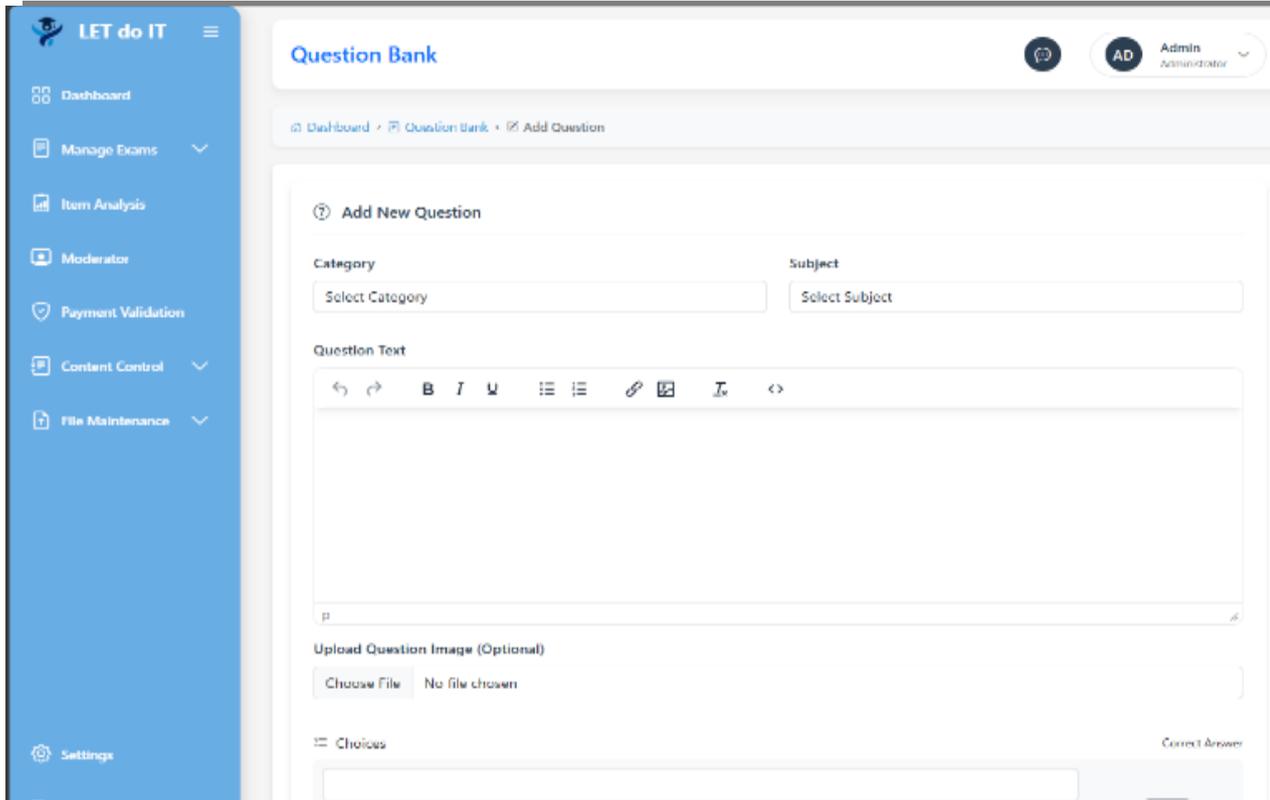


Figure 8. WYSIWYG Interface

The Question Bank module serves as the central repository for all inputted examination questions within the system. Through this module, the administrator is given full control over question management, including the ability to add new questions, edit existing ones, modify their details, and enable or disable questions as needed through a toggle function. Each question entry clearly displays essential information such as the question text, assigned category, subject area, multiple-choice options, and the designated correct answer, ensuring organized and systematic management of content. Additionally, a WYSIWYG (What You See Is What You Get) interface is integrated into the module, allowing administrators to create, format, and revise questions with ease. This interface provides real-time visual feedback, enabling administrators to see the final appearance of questions as they are being edited, which helps reduce errors, improve content accuracy, and enhance overall efficiency in question preparation and maintenance.

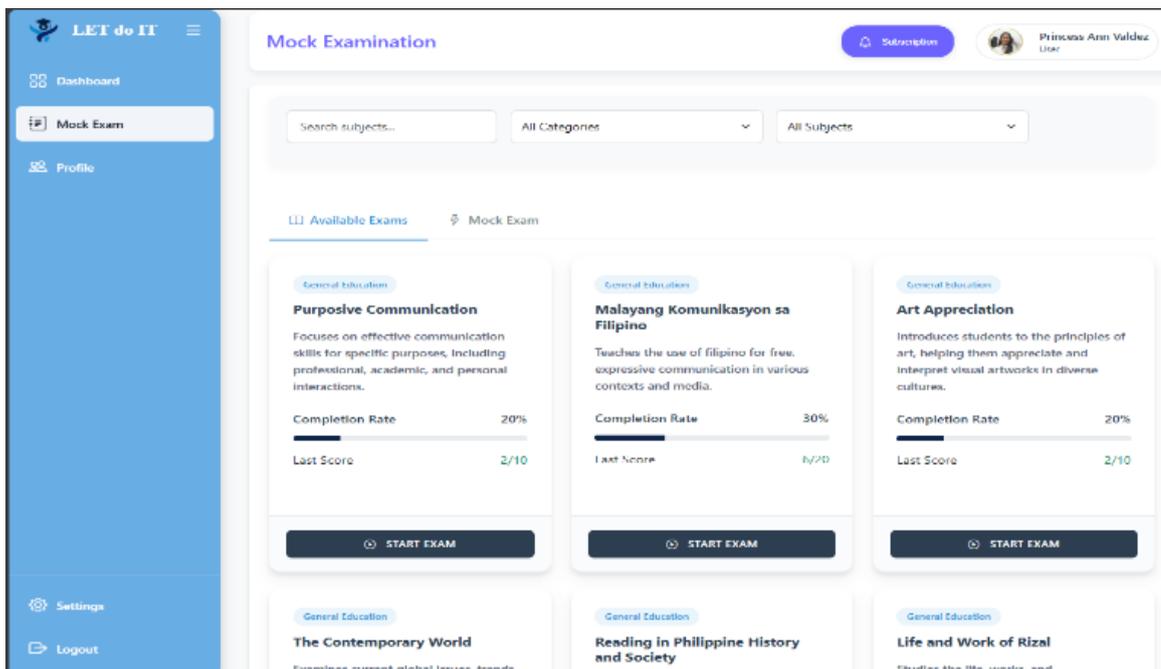


Figure 9. Mock Examination

This is the interface where users take an actual examination. It is divided into two parts. First, it varies by the Gen Ed subjects available, where the user can customize the time, number of questions, and view the test results. Second is the actual mock examination that can also be customized by time and preferred number of questions that vary across different Gen Ed subjects.

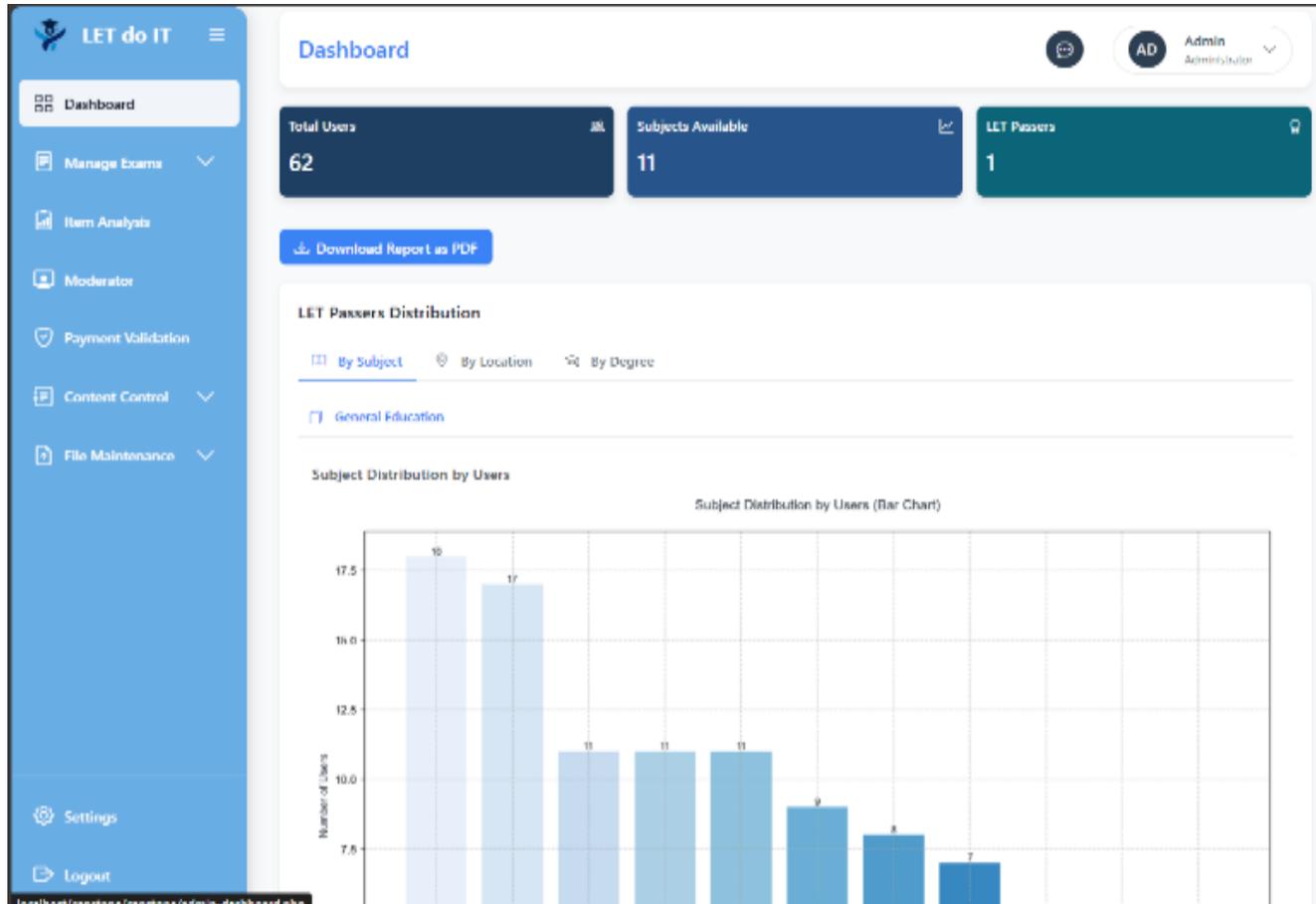


Figure 10. Admin Dashboard

The admin dashboard displays key statistics like total users, LET passers, completion rate, and average score. It also includes bar and line graphs that visualize user demographics by category and the subject, school location, and degree, helping admins easily track performance and engagement.

The Implementation of Performance Analytics

The performance analytics module, also shown on the user dashboard, is one of the most critical features of the system because it transforms raw exam data into meaningful insights that guide both learners and administrators. For individual users, the system records score from pre-tests, overall progress, number of study sessions, and the average score. These metrics—including test scores, subject analysis, and improvement trends—are displayed through visual elements such as graphs and progress indicators, making data easy to interpret. As a result, the reviewee can identify their strongest and weakest subjects, track learning progress over time, and adopt more targeted study strategies. By providing immediate, data-driven feedback, the system promotes self-regulated learning, encouraging examinees to focus on areas needing improvement while reinforcing mastery in topics they already excel in.

The system integrates comprehensive data analytics into both user and admin dashboards to effectively track and analyze learning performance. The user dashboard provides two levels of analytics: descriptive and predictive. Descriptive analytics include reports on overall progress, the count of study sessions, pre-test results, average scores, and summaries of recent exam attempts. Predictive analytics offer insights such as monthly performance

trends by subject, allowing users to monitor their progress, estimate exam readiness, and receive personalized study recommendations to target areas needing improvement. This dual approach empowers learners to understand their current standing and proactively enhance their preparation strategies.

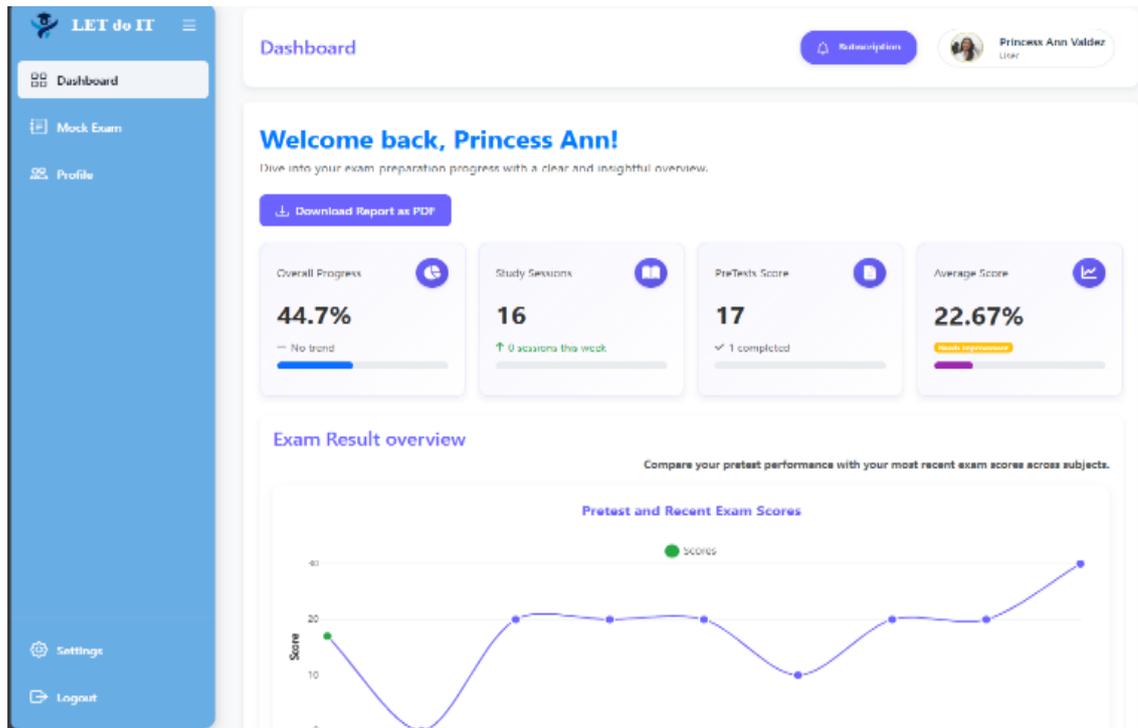


Figure 11. Performance Analytics

Implementation of the Rule-based Classification

```

if (!empty($results)) {
    $overallAvg = array_sum(@var mixed $subject :s, 'avg_percentage') / count($results);
    foreach ($results as $subject) {
        $subjectData = [
            'subject_name' => $subject['subject_name'],
            'avg_percentage' => round($subject['avg_percentage'], 1),
            'exam_count' => $subject['exam_count'],
            'max_score' => $subject['max_score'],
            'min_score' => $subject['min_score'],
            'improvement_potential' => round($subject['max_score'] - $subject['min_score'], 1),
            'consistency' => $subject['exam_count'] > 1 && $subject['score_variation'] ?
                round(100 - ($subject['score_variation'] / $subject['avg_percentage'] * 100), 1) : 100
        ];

        $analysis['all_subjects'][] = $subjectData;

        if ($subject['avg_percentage'] >= 80) {
            $analysis['strengths'][] = $subjectData;
        } elseif ($subject['avg_percentage'] >= 60) {
            $analysis['moderate'][] = $subjectData;
        } else {
            $analysis['weaknesses'][] = $subjectData;
        }
    }
}

```

Figure 12. Conditional Statements

This study employed a rule-based classification algorithm, which applies predefined rules and threshold values to classify data into specific categories. This approach effectively aligns with the system’s goal of evaluating and categorizing user performance rather than predicting complex numerical values. The rule-based classification algorithm enables the system to organize users into performance levels based on their results,

making it easier to identify strengths and areas that need improvement. Using this approach, the system provides meaningful suggestions that guide users on which areas to focus on. This algorithm is part of the predictive analytics component, which leverages existing performance data to anticipate user needs and offer personalized recommendations. In addition, descriptive analytics was utilized to summarize data such as subject analysis, location, and degree distribution, allowing administrators to clearly see patterns and trends within the system.

User Acceptance Test Result

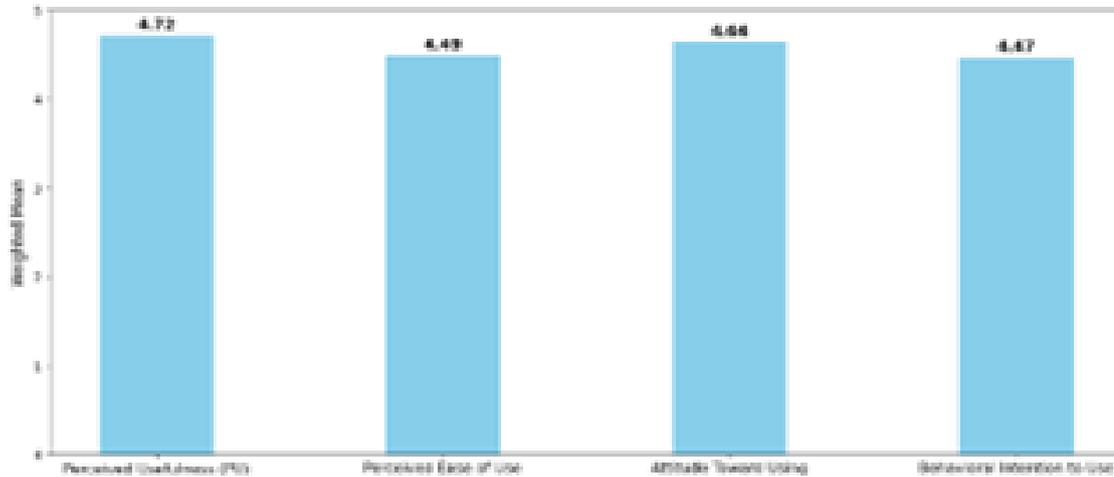


Figure 13. User Acceptance Test Result

User acceptance evaluation based on the Technology Acceptance Model revealed high perceived usefulness, ease of use, and behavioral intention to use the system. The overall weighted mean of 4.58 (Strongly Agree) suggests strong acceptance among education students, indicating that the system effectively supports their review activities.

System Evaluation Test Result

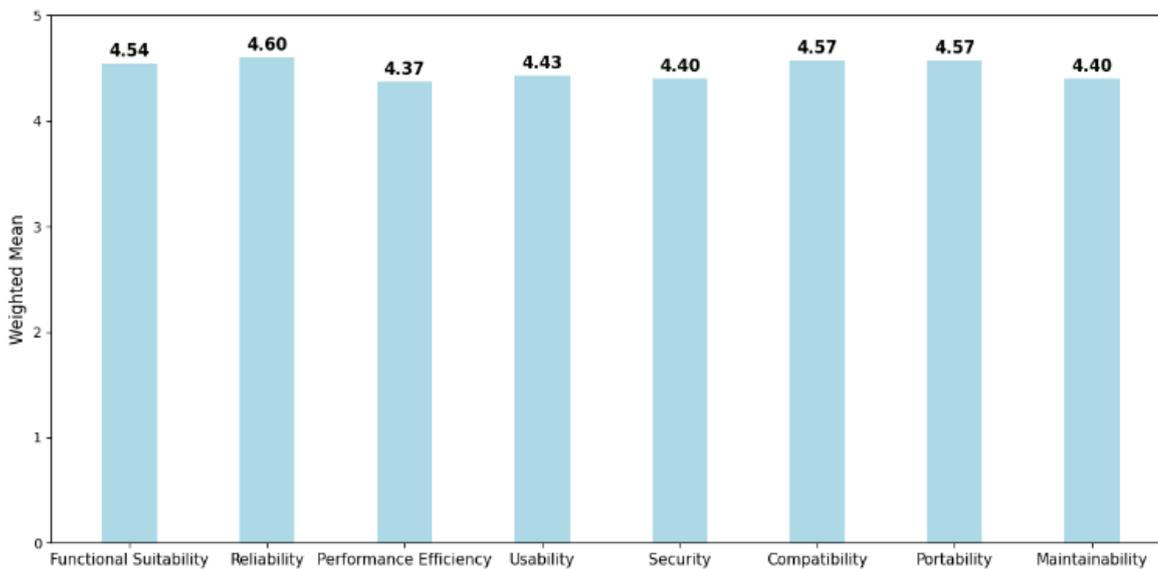


Figure 14. System Evaluation Test Result

Evaluation using ISO/IEC 25010 standards yielded an overall weighted mean of 4.48 (Agree), with high ratings in reliability, compatibility, and functional suitability. These results demonstrate that the system meets established software quality criteria and performs reliably across intended use scenarios.

Limitations and Future Researchers

The study is limited by its evaluation scope, involving a relatively small sample from a single institution and short-term usage data. Future research should involve a larger and more diverse population across multiple Teacher Education Institutions. Longitudinal studies incorporating actual LET performance data are recommended to empirically validate the system's impact on licensure examination outcomes. Comparative studies exploring alternative analytic approaches, such as machine learning models, may also enhance methodological rigor.

CONCLUSION

This study demonstrated the successful development and evaluation of LET do IT, an online LET reviewer integrated with performance analytics. The system effectively supports structured exam preparation by combining review content, mock examinations, and transparent analytics that promote performance awareness and self-regulated learning. High user acceptance and favorable quality evaluation indicate the system's readiness for broader deployment. While further validation is required to assess long-term impact on licensure outcomes, the findings suggest that analytics-driven online review platforms hold significant potential for enhancing teacher licensure preparation.

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REFERENCES

1. B. G. L. H. S. R. M. D. L. T. P. R. Vital, "Soft Computing in Data Analytics," in Springer, Singapore, 2019.
2. M. Y. J. L. N. Wang, "Research on Student Achievement Analysis Method Based on Decision Tree Algorithm," in IEEE, Frankfurt, Germany, 2022.
3. R. T. M. K. R. V. S. A. S.J, "A Comprehensive Survey on Usage of Learning Analytics for Enhancing Learner's Performance in Learning Portals," *Journal of Educational Technology Systems*, 2023.
4. S. B. S. b. G. C. c. C. C. Y.-S. T. c. J. K. e. S. K. b. R. M.-M. c. S. S. D. G. Hassan Khosravi, "Explainable Artificial Intelligence in education," *Computers and Education: Artificial Intelligence*, 2022.
5. S. D. F. Giovanni De Gasperis, "A Comparative Study of Rule-Based and Data-Driven Approaches in Industrial Monitoring," 2025. [Online]. Available: <https://arxiv.org/pdf/2509.15848v1>. [Accessed Jan 08 2026].

6. PRC, "LET PASSING RATE: Exam Statistics in the Previous Years," Board Exams PH, 13 December 2024. [Online]. Available: <https://boardexams.ph/list-of-passers/september-2024-licensure-exam-for-teachers-let-secondary-level/>. [Accessed February 2025].
7. B. S. T. J. J. A. A. C. Q. T. C. Cabahug M, "Graduates Are Failing in the Examination: An Ethical Investigation on the Experiences of Board Licensure Examination for Professional Teachers (BLEPT) Takers," American Journal of Multidisciplinary Research and Innovation, vol. 3, no. 2, pp. 1-6, 2024.
8. M. Lacambra, "Cost analysis of LET review programs in the Philippines,," Philippine Journal of Education, vol. 94, no. 2, pp. 45-56, 2021.
9. R. B. Dimas, "Factors Affecting the Licensure Examination for Teachers (LET) Performance of BSED Graduates," Pakistan Journal of Life and Social Sciences, 2024.
10. J. o. P. A. a. Governance, "Challenges and Dilemmas of Digitalization in Philippine Education," Journal of Public Administration and Governance, vol. 14, no. 2, pp. 37-52, 2024.
11. J. M. V. J. T. C. P. G. F. J. H. R. Lucero, "Assessment of E-Learning Readiness of Faculty Members and Students in the Government and Private Higher Education Institutions in the Philippines," International Journal of Computing Sciences Research, vol. 5, p. 398 to 406, 2020.
12. M. Jaymalin, "PRC to intensify campaign vs review centers," The Philippine Star, Manila, 2010.
13. C. S. PUNO, "Implementing Rules and Regulations Governing the Establishment and Operation of Review Centers and Similar Entities," 3 Nov 2006. [Online]. Available: <https://legaldex.com/laws/implementing-rules-and-regulations-governing-the-establishment-and-operation-of>.
14. R. F. e. a. Schmid, "A meta-analysis of online learning, blended learning, the flipped classroom, and traditional classroom in higher education," Computers and Education: Artificial Intelligence, 2023.
15. P. a. Paderes, "Readiness of Bachelor of Secondary Education Graduating Students for the Licensure Examination for Professional Teachers," International Journal of Research and Innovation in Social Science (IJRISS), 2024.
16. A. G. Picciano, "Theories and Frameworks for Online Education: Seeking an Integrated Model," Online Learning, vol. 21, no. 3, pp. 166-190, 2017.
17. B. G. L. H. S. R. M. D. L. T. Pandu Ranga Vital, Soft Computing in Data Analytics, Springer, Singapore: Springer, 2019, pp. 743-757.