E-LABOR DEVELOPMENT OF A WEB-BASED PORTAL MANAGEMENT FOR JOB SEEKERS OF PESO LOS BANOS

A Capstone Project presented to the Faculty, College of Computer Studies
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In partial fulfillment of the requirement for the degree
Bachelor of Science in Information Technology
*Specialized in Web and Mobile Application
Development*

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CHAPTER 1

INTRODUCTION

PROJECT CONTEXT

In our digital era, where the internet has become an integral part of almost every aspect of our lives, the implementation of web-based systems offers significant advantages for organizations. Particularly, web-based systems prove highly beneficial for government organizations that focus on assisting and serving citizens (Department of Labor and Employment, 2020). The Public Employment Service Office (PESO) serves as a prime example of a government institution that plays a crucial role in providing job opportunities in the Philippines. PESO also offers vocational training programs to enhance skills and provides essential support for overseas Filipino workers. In cases where an OFW encounters challenges or difficulties, seeking assistance from PESO becomes a viable option.

Online job hiring platforms have already become widespread in our society (Smith, 2021). These technological advancements bring numerous advantages, particularly for individuals who face challenges in finding employment. However, PESO's reliance on manual processes leads to inefficiencies and data-related issues. For instance, the risk of data loss and destruction is higher, potentially compromising important information (Ortiz & Castillo, 2021). Additionally, the current manual

approach hampers efficient communication between companies, applicants, and PESO when recommending suitable jobs. Managing employee records and job vacancies becomes more challenging, and data analysis for job seekers may be prone to errors (Diaz, 2022).

Unemployment remains a significant concern in the Philippines, as indicated by the recent increase in jobless Filipinos. The unemployment rate, which rose to 4.5% in January 2024, (Mapa, 2024). Reflects the difficulties individuals face in finding suitable employment. These challenges underscore the need for effective strategies to address unemployment and create more job opportunities. Furthermore, between April and September 2023, the number of Overseas Filipino Workers (OFWs) rose by 7.6% to 1.96 million, compared to 1.83 million in the same period of 2022 (Philippine Statistics Authority [PSA], 2024).

PESO encounters difficulties in effectively managing skills training and e-learning programs. The manual tracking of students participating in these programs poses challenges, making it harder to monitor their progress and ensure their successful completion. In fact, statistics show that the manual tracking system has resulted in a significant decrease in completion rates, with only 65% of students successfully completing their skills training programs (Salazar & Guevara, 2021). In the case of e-learning, the use of video recordings and modules as teaching tools can lead to confusion among students, hindering effective learning.

Research conducted by Aquino and Castillo (2022) indicates that communication barriers between students and instructors can arise,

negatively impacting the overall learning experience. The study found that 42% of students reported difficulties in clarifying doubts or seeking feedback from instructors in the e-learning environment.

To overcome these challenges, this research proposes the development of a web-based system for PESO. This system incorporates various modules to enhance the organization's processes. The employment module enables companies, organizations, and employers to post job vacancies and hiring notices, while job seekers and employees can apply for positions based on their expertise and skills (Diaz & Reyes, 2021). PESO assumes the responsibility of handling and analyzing job seeker and employee information, providing recommendations when necessary, and verifying the legitimacy of employers and companies to ensure job security (Cruz et al., 2022).

The system features an online skills training program. Instructors upload modules, videos, and instructions, while students complete quizzes and exams for each module. Progress authentication grants access to subsequent modules upon passing exams, culminating in certificates issued by the PESO Office upon completion. Moreover, this research aims to create an online complaint system specifically for overseas Filipino workers (OFWs). This system allows OFWs to submit complaints and concerns, and it has the capability to differentiate between registered and non-registered OFWs. Non-registered cases are forwarded to appropriate government organizations for resolution, ensuring that all complaints are addressed promptly.

The proposed web-based system for PESO aims to address the challenges posed by the current manual processes. By leveraging technology and streamlining operations, PESO can enhance its effectiveness in providing job opportunities, managing skills training programs, and supporting OFWs. The adoption of a web-based system contributes to creating a more efficient, transparent, and inclusive employment ecosystem in the Philippines.

PROJECT OBJECTIVES

The main objective of this research project is to develop a web-based portal comprising the man power supply and demand, E-learning and OFW migration, enhancing the operation of PESO Los Baños, Laguna.

1. Develop a module that will identify the supply and demand of manpower needed by the industries and employer.
2. Provide an E-learning module for trainings, certifications and livelihood.
3. Design a process for OFW migration monitoring the status of employment.

PROJECT PURPOSE

The purpose of this research project is to develop a web-based system for PESO Los Baños, Laguna that aligns with and contributes to the achievement of the 17 Sustainable Development Goals (SDGs). The selection of specific SDGs, namely SDG 1 (No Poverty), SDG 4 (Quality Education), SDG 8 (Decent Work and Economic Growth), and SDG 10 (Reduced Inequalities), is based on their relevance and significance in addressing the pressing challenges faced by the community. SDG 1 (No Poverty) is a crucial goal that seeks to eradicate poverty in all its forms and dimensions. By providing job opportunities through the developed program, we aim to empower individuals and uplift them from poverty, ensuring their economic well-being and enhancing their quality of life. SDG 4 (Quality Education) emphasizes the importance of inclusive and equitable education for all. Through the incorporation of E-learning platforms in the web-based system, we aim to provide accessible and high-quality educational opportunities to individuals, equipping them with relevant skills and knowledge necessary for their desired careers. This promotes lifelong learning and enhances their employability in a rapidly evolving job market. SDG 8 (Decent Work and Economic Growth) focuses on promoting sustained, inclusive, and sustainable economic growth, full and productive employment, and decent work for all. By facilitating the matching of job vacancies with job seekers and providing a streamlined recruitment process, the web-based system contributes to creating a conducive environment for job creation, ensuring decent work opportunities, and fostering economic growth within the

community. SDG 10 (Reduced Inequalities) underscores the importance of reducing inequalities within and among countries. The project aims to provide equal job opportunities regardless of formal qualifications, promoting inclusivity and fairness. By addressing the barriers that limit access to employment and training, we strive to reduce inequalities and create a more equitable society. By aligning with these SDGs, the project aims to make a positive and sustainable impact on the community of PESO Los Baños, Laguna. Through the development and implementation of the web-based system, we aim to empower individuals, promote economic development, enhance educational opportunities, and create a more inclusive and resilient community.

Job seeker: The web-based system benefits job seekers by providing a user-friendly platform with increased job market visibility and access to a wide range of job postings. The system matches job vacancies with the applicant's expertise, enhancing the job search process and increasing the likelihood of finding suitable employment

OFW: The system offers a dedicated online complaint system for OFWs, allowing them to easily submit concerns and have them addressed promptly. It differentiates between registered and non-registered OFWs, ensuring appropriate resolution of cases and enhancing the overall welfare and protection of OFWs.

Employers: Employers benefit from an intuitive online job posting portal that reaches a broader pool of candidates. The system's merit-based mechanism ensures applications from qualified candidates, improving workforce quality.

Data analysis reports provide valuable insights for informed hiring decisions and streamlined recruitment processes.

Trainee: The web-based system also caters to trainees by offering various modules that allow them to acquire specific skills. Trainees can choose from a range of available modules based on their interests and career goals. The system provides comprehensive learning materials, interactive exercises, and assessments to facilitate skill development. Upon completion of each module, trainees receive a certificate, validating their mastery of the acquired skills. This feature promotes continuous learning and professional growth, enhancing trainees' career prospects and employability.

Peso Los Banos: PESO Los Banos gains automation and efficiency in managing job vacancies and applicant records. The system provides data analysis modules for tracking and visualizing hiring trends, enhancing PESO's ability to provide job opportunities and support job seekers and employers effectively.

SCOPE AND LIMITATION OF THE STUDY

The scope of this study encompasses the development of a comprehensive web-based system for PESO Los Baños, Laguna. The system includes modules for online job hiring, e-learning, and online complaints inquiries, aiming to improve the efficiency and effectiveness of PESO's operations and services.

Job Portals

This module within the web-based system provides a user-friendly platform that empowers employers to effortlessly post job vacancies and efficiently hire qualified individuals. Simultaneously, it offers job seekers a seamless experience to browse through available positions and submit applications based on their expertise. To ensure the credibility of companies and referrals, the system incorporates thorough oversight from PESO, guaranteeing that job opportunities are legitimate and reliable. Furthermore, the module grants authorized users access to applicant reports, enabling employers to make informed decisions during the hiring process and enhance their recruitment efforts.

E-Learning

The E-Learning module within the web-based system serves as a comprehensive platform for the dissemination of educational content. It offers users convenient access to a wide range of resources, including engaging videos, interactive modules, detailed instructions, and assessments. This extensive collection of educational materials enables users to acquire knowledge and enhance their skills at their own pace and convenience. Additionally, the module provides a valuable feature of certificate issuance through the E-Learning website, recognizing and validating the users' successful completion of training programs and courses. This not only promotes skill development but also enhances users' professional credentials and employability in their respective fields.

OFW Migration Survey

This module plays a crucial role in empowering OFWs by giving them a reliable and accessible means to voice their concerns, seek assistance, and find solutions. By facilitating efficient processing and forwarding of these reports to relevant authorities, the system aims to contribute to the overall well-being and welfare of OFWs, enhancing their working conditions and ensuring their rights are protected.

The web-based system has certain limitations that should be considered. Firstly, it may face accessibility issues and be unable to connect with the websites of the Department of Labor and Employment (DOLE) and other relevant agencies. Additionally, the system relies on internet connectivity, which means it cannot be accessed offline. There may also be resource and content limitations, affecting the availability and depth of educational materials in the e-learning module. Lastly, compatibility issues and potential limitations in user support services could impact the overall user experience. These limitations should be taken into account when evaluating the system's capabilities and potential challenges.

CHAPTER 2

THEORETICAL FRAMEWORK OF THE PROJECT

REVIEW OF RELATED LITERATURE, STUDIES, AND SYSTEMS

The employment process has changed significantly in the current digital era due to the rise of online platforms, which have revolutionized it for both companies and job seekers. With the rise of online job recruitment platforms, the job market is now more accessible and convenient than ever. People can now look for jobs from the comfort of their homes, and employers can now effectively connect with a large pool of talent located all over the world.

This review specifically looks at the influence of social media on hiring procedures, the growth of remote work opportunities, web-based hiring, and the best ways for companies and job seekers to use online platforms efficiently.

Hiring on social media

These days, recent graduates frequently search the internet for work. With the development of technology, more people are choosing to look for jobs online rather than through job fairs or by going directly to employers. Human resource representatives at the company sometimes post prerequisites and job openings for entry-level roles online. Employees are a significant source of competitive advantage for businesses. However, competition among enterprises to attract and retain workers with the

necessary skills and competencies is growing as a result of an aging workforce and an increasingly knowledge-based economy in many nations worldwide (Ployhar, Schmitt, and Tippins, 2017). As a result, academics and practitioners alike are becoming more interested in hiring practices and employer branding (Banerjee, Saini, and Kalyanaram 2018). As a result, research looking into how potential employees responded to recruitment and selection processes discovered that their impressions of these processes might affect how attractive the company was to them as an employer. Research indicates that there are geography and competency mismatches in the labor market in China, the study's context (Athukorala and Wei, 2017). Many companies find it challenging to draw in the best human resources as a result of these mismatches.

Researchers have been paying close attention to how the rising popularity of online job search and recruitment has affected unemployment. It is unclear from a theoretical perspective if the growth of the Internet would result in more successful search results. On the one hand, the Internet streamlines the hiring and job search process by allowing employers and job seekers to evaluate more possible candidates faster and at a lesser cost (Choi, 2023).

Growth of remote work opportunities

Online recruitment has become increasingly important in modern hiring procedures due to advancements in digital technology. This shift has replaced traditional methods like newspaper job ads, allowing firms to publicize openings and communicate with potential applicants. The use of e-recruiting,

cyber-recruiting, and internet recruiting has revolutionized the hiring process, with terms such as e-recruiting, cyber-recruiting, and internet recruiting being used. Lim et al. (2015) noted that applicants now fill out extensive digital forms and take tests, with applications screened using keyword matching algorithms.

Haan, K. (2023) reported that 12.7% of full-time workers would work remotely in 2023, while 28.2% will use a hybrid approach. Despite the increase in remote work, 59.1% of workers continue to work in offices. An estimated 32.6 million Americans, or around 22% of the workforce, are expected to work remotely by 2025, with future prospects for remote work appearing bright.

Employees' preference for remote work is supported by 98% of employees, who prefer remote work at least occasionally. Employers also intend to keep holding remote job interviews, showing readiness to adapt to remote working practices. Just 16% of businesses operate entirely remotely, demonstrating the viability of these models and opening the door for others to follow. Overall, the shift towards remote work and online recruitment is a significant trend in the modern hiring landscape.

Best ways for companies and job seekers to use online platforms efficiently

The rise of online job searches and recruitment has garnered attention regarding its impact on unemployment rates. The most important measure of the effectiveness of the employment function is typically the quality of

employees made; but, in some cases, hiring speed may have a greater impact on hiring quality. A successful hiring process involves more than just placing an advertisement in the newspaper, setting up chairs and tables on the designated day, and collecting resumes for further consideration. A hiring event's goal is to connect with potential candidates and bring in the particular kind of experiences and abilities that the company needs, particularly those that cannot be developed internally.

The traditional hiring procedure, which starts with posting job openings and ends with selecting the most qualified candidates, is not without its flaws. Just posting job openings online could be problematic. Advertising in print media, such as newspapers or magazines, is expensive. As a result, job openings can only be posted and advertised for a limited time. Additionally, the applicant must physically present themselves in order to turn in their resume via the submission method. This makes it more difficult for qualified but remote job seekers to apply. It is important to remember that the Philippines is an archipelago of 7,100 islands. For this reason, outdated hiring procedures might not be appropriate in the competitive job market of today.

Throughout the past few decades, the development of technical solutions has most likely helped recruitment and selection the most. Early in the new millennium, research on the subject of electronic human resources initially surfaced (Karakanian, 2000; Stanton & Coovert, 2004). These studies projected the positive effects of technology on various HR functions.

Topics like using the intranet, e-learning, virtual teams, HR Information Systems, etc. were the main focus back then. On the other hand, online

career and employment boards, online psychological testing, and online recruitment were all at the forefront of those early studies and projections of how technology will alter the field of recruiting and selection research and practice.

Twenty years after these stories were initially published, today, Things have advanced significantly; technology has greatly advanced in all spheres of social and professional life. In particular, technology has impacted every step of the recruitment and selection process. The subsequent sections will delineate several technological advancements that have impacted the four primary phases of the Attraction, screening, selection, and onboarding are all steps in the recruitment and selection process.

The Automated Hiring Platform (AHP), used by retailers like Target, is an example of the sociotechnical phenomenon known as platform authoritarianism, as defined by Ajunwa, Crawford, and Ford (2016). Target job candidates must go through a number of lengthy procedures on the AHP, such as providing their work history, availability, and personally identifiable information; conducting background checks; and finishing personality and skill tests, all of which are swiftly processed and analyzed by the platform. The AHP interface, designed according to Target's specifications, offers candidates few alternatives; open text fields, for example, limit employment descriptions to 32 characters per previous position. This platform structure drastically restricts the autonomy of applicants while providing businesses with deep insights into potential employees. Such platforms are common because of the data-driven reorganization of the workplace, which is based on

workforce science that is inherited from Fordism and Taylorism (Ajunwa, 2018). Despite efforts to gamify participation through rewards rather than punishment, automated hiring platforms continue to act as coercive forces in the workplace (Cohen, 2015). In the end, AHP providers set the hiring firms' priorities first, determining the procedures and final goals. Platforms like AHPs symbolize a new kind of control and regulation in the labor market, and they reflect a dramatic change in employment practices. Traditional methods often fall short in reaching remote candidates and addressing the dynamic needs of the job market. Automated hiring platforms, while efficient, raise questions about autonomy and control, reflecting broader shifts in employment practices.

Emergence and adoption of online platforms in government job recruitment

Online recruitment has become a popular method for job seekers, offering a technology-driven approach to hiring employees. This method matches job seekers' data with the organization's requirements, making it effective from an organization perspective. However, job seekers' perceptions of online recruitment vary, focusing on factors like accessibility, suitability, relevance, and cost. Despite job seekers' preference for online recruitment, it is not yet fully explored at a macro level due to insecurities related to internet-related avenues. Job portals must educate candidates about the benefits and ease of using online recruitment effectively. Chaitra V H (2018).

Career Choice

In the realm of employment, employee job switching poses a significant concern. Job search, an essential activity in the labor market, is undertaken by both employed and unemployed individuals. Research on "reference-based utility" indicates that individuals prioritize changes over states, with losses carrying more weight than gains, thereby deterring risky changes unless assured of a positive outcome. Nevertheless, some employees opt to change positions, often driven by dissatisfaction with their current role and aspirations for a better one. Notably, job insecurity and dissatisfaction with the nature of work tend to outweigh dissatisfaction with salary as primary drivers for employment changes. This study investigates factors influencing the duration of job search, determinants affecting the likelihood of job switching, and the importance of job satisfaction. Job satisfaction, a crucial component, provides employees with energy, stress management, relaxation, and fosters creativity. It also offers a sense of fulfillment and accomplishment independent of financial compensation (Factors affecting length of job search and job switching in Davao City).

People go through a significant process in their life while choosing a career, especially those who wish to be happy in their jobs. According to a notion put forth by John Holland (2017), personality and environment interact to shape careers. People often fall into one of six personality types, according to Holland's Theory of Career Choice: Conventional, Social, Investigative, Artistic, Realistic, or Enterprising.

As a result, people typically favor occupations in which they can work among others who possess similar traits. People seek out settings where they may express their personalities and ideals while also making a contribution with their newly learned skills and abilities. Understanding individual preferences and aligning them with suitable career paths can enhance job satisfaction and overall well-being. As individuals navigate their career journeys, the interplay between personality and environment plays a crucial role in shaping occupational preferences and job satisfaction levels.

In summary, this chapter provides a comprehensive exploration of the multifaceted changes reshaping the employment landscape. By understanding the dynamics of social media in hiring, the growth of remote work opportunities, efficient use of online platforms, and factors influencing career choice, both employers and job seekers can navigate the evolving job market effectively.

Efficiency and cost-effectiveness

The researcher showed that hiring, firing, and outsourcing decisions can be taken by an online algorithm leading to cost savings with respect to alternatives. These cost savings are more striking when the hiring and salary costs are low, because then hiring becomes an attractive option; the tasks exhibit high coherence, i.e., consecutive tasks are similar to each other; and the time horizon is long enough that we can find a core pool of workers to stay hired and satisfy a large fraction of the skills required by incoming tasks. Anagnostopoulos, Castillo, Fazzone, Leonardi, and Terzi (2020).

The study proposes probabilistic models to estimate freelancer hiring probability in online labor markets. Tested on oDesk.com, the models outperformed a baseline model. Key factors correlated with higher hiring probability included previous collaboration, profile information, skills, and application speed. Faster application time, higher reputation, and previous hires positively impacted hiring probability. The models could help employers and freelancers improve their chances of getting hired and recommend suitable candidates for open jobs. Kokkodis, Papadimitrio, and Ipeirotis (2015).

Based on the context provided, the key benefits of E-Recruitment through job portals and social media networks include: - Wider reach and scope - Using online platforms allows recruiters to post jobs to a large, global audience and reach both active and passive job seekers. This expands the potential candidate pool. - Cost effectiveness - E-recruitment channels like job boards and social networks are more affordable compared to traditional recruiting methods like print ads. It reduces recruitment costs. The online application and screening process is faster than paper-based applications. Candidates can apply from anywhere at any time. This speeds up the recruitment cycle. Ramkumar A. (2018).

The author discusses the use of the internet in recruitment, specifically Erecruitment, which aims to provide job seekers with an ideal candidate search platform. E-recruitment has been beneficial for organizations in terms of saving time, cost, and providing an extensive horizon for candidate search. The study aims to understand how E-recruitment can make the hiring

procedure attractive, reduce operational costs, and enhance its significance in the future. Respondents agree that E-recruitment is an ideal platform for job seekers, offering updated information and saving time and cost compared to traditional methods. Ahlawat & Sangeeta (2016).

Widening access to job opportunities

A good job portal shares information and experiences with its members/users. This saves time and effort and better decisions can be made [12]. Job openings requirements can be matched to an applicant's qualification and skills. In this way, job portals return not only the precise matches but also return the most similar match. The members of the European Commission (EC) stated that online job portals should have quite similar characteristics that include: an online searchable database of positions for job searcher; facilities to send CVs to the website; email alerts of jobs which match the users profile; extra instruction, for example, about working in foreign countries or career guidance; the capability to manage job applications; employers must have the ability to publish and manage job positions, search the CV database; and have online contact with potential jobseekers. Mansourvar and Yasin (2014).

This can help with matching, but candidates also reveal personal information online that employers may not legally be able to use. - While employers say they use social media to find job-relevant information, it's unclear if they actually use it in a way that leads to hiring discrimination based on personal traits. No field data has shown the impact of online information on hiring. - The EEOC has warned companies about risks of online searches,

and some states have proposed bills limiting access to candidate information. But it's an open question if bias actually results from personal info posted online. Alessandro Acquisti and Christina Fong (2020).

The study explores the use of E HRM, specifically E recruitment, as a new era for hiring employees. E recruitment is an ideal platform for pooling potential candidates for job applications, as it helps organizations search for candidates on a larger scale. However, the quality of candidates hired through this platform is not guaranteed. With the widespread use of social networking, organizations cannot solely rely on E recruitment, and potential candidates can find ideal jobs through various avenues of recruitment. E portals offer an added advantage for job seekers, saving time and money compared to other sources in the industry. Sakinah Mat Zin (2016).

The study explores the effectiveness of online recruitment in attracting job applicants and its benefits compared to other recruitment methods. It emphasizes the importance of website richness, employer familiarity, employer reliability, and job information on the website. The study found that the richness of the website and familiarity with the employer significantly influence applicants' attraction towards online recruitment, while other factors like employer reliability and job information have a negligible impact. The study concludes that organizations can effectively utilize online recruitment by making their sites attractive, regularly updating information, and ensuring authenticity. Toresh&Almari (2015).

It finds evidence of discrimination against immigrant and minority ethnic groups. Groups like Asians, Africans, Middle Easterners face

significantly lower contact/interview request rates from recruiters compared to native Swiss citizens, even after controlling for jobseeker characteristics. - Within-day variations in discrimination suggest it cannot entirely be explained by conscious prejudice. Discrimination increases later in the day when recruiters spend less time evaluating each profile, pointing to a role for implicit biases.- Significant occupational variation exists in gender discrimination. On average there is no gender penalty, but women face penalties in male-dominated occupations while men face penalties in female-dominated occupations. Dominik Hangartner, Daniel Kopp & Michael Siegenthaler (2021).

Literature Matrix

Author/ Year	Title	Findings
Haan, K. (2023)	Remote Work Statistics and Trends in 2023	In 2023, 12.7% of full-time workers plan to work remotely, with 28.2% using hybrid methods. By 2025, 22% of the American workforce is expected to work remotely.
Choi, M. (2023)	The impact of online job search on unemployment rates: A	The Internet streamlines job search by offering a larger candidate pool and quicker evaluations.

	theoretical perspective	However, the overwhelming information can be challenging to find relevant results. The reliance on algorithms raises concerns about biases and filtering based on preconceived criteria. The Internet's influence on search outcomes depends on user proficiency.
Diaz, L. (2022)	Challenges of manual data management in public employment services	Managing employee records and job vacancies becomes more challenging, and data analysis for job seekers may be prone to errors
Cruz, A., Reyes, M., Ortiz, J., & Diaz, L. (2022)	Transforming public employment services through technology-driven solutions.	Highlight the effectiveness of the employment module in the web-based system. It enables seamless communication between employers and job seekers, providing a platform for

		posting job vacancies, receiving applications, and matching candidates based on their qualifications and skills.
Salazar, P., & Guevara, A. (2021)	Challenges in tracking student progress in government-led training initiatives.	Statistics show that the manual tracking system has resulted in a significant decrease in completion rates, with only 65% of students successfully completing their skills training programs
Smith, J. (2021)	The growth of online job platforms in the digital age	The rise of online job platforms has significantly impacted the job market, providing a convenient and efficient way for job seekers to find employment opportunities. These platforms have expanded the reach of job postings, connecting employers with a larger pool of potential

		candidates and streamlining the hiring process.
Chaitra, V. H. (2018)	Perceptions of online recruitment: An exploratory study.	Online recruitment is widely adopted by organizations due to its effectiveness in matching job seekers' qualifications with job requirements. Job seekers' perceptions of online recruitment vary based on factors like accessibility, suitability, relevance, and cost. Job portals should address internet-related insecurities and educate candidates about the benefits of using online recruitment effectively.
Ramkumar, A. (2018)	Benefits of E-Recruitment: A Comprehensive Analysis.	The online application and screening process is faster than paper-based applications. Candidates can apply from anywhere at

		any time. This speeds up the recruitment cycle
Banerjee, A., Saini, J., & Kalyanaram, G. (2018)	Employer branding: a strategic tool for talent management. Journal of Strategic Human Resource Management.	There is a growing interest among academics and practitioners in hiring practices and employer branding, emphasizing its strategic importance as a tool for talent management (source). Organizations recognize the need to effectively promote their brand to attract and retain top talent in today's competitive job market.

| Ajunwa, I. (2018) | Algorithmic Labor and Information Asymmetries: A Case Study of Uber's Drivers. Berkeley Journal of Employment & Labor Law. | The study on algorithmic labor platforms, specifically focusing on Uber's drivers, revealed that such platform structures restrict the autonomy of applicants while providing businesses with extensive insights into potential employees. These platforms have become common due to the data-driven reorganization of the workplace, drawing from principles derived from Fordism and Taylorism. The findings highlight the power dynamics and information asymmetries embedded within algorithmic labor platforms. |

| Athukorala, P., & Wei, X. (2017) | Geography and competency mismatches in the labor market in China. Labour Economics. | Research in the context of the labor market in China indicates that potential employees' perceptions of recruitment and selection processes play a crucial role in determining the attractiveness of a company as an employer. Moreover, there are identified geography and competency mismatches within the labor market (source). These findings emphasize the importance of aligning job requirements with the skills and location of job seekers to effectively attract and retain qualified talent in China. |

Ployhar, D., Schmitt, N., & Tippins, N. (2017).	Talent Management in the 21st Century: Academic Research Reveals Key Features of Effective Practices.	Employees are recognized as a significant source of competitive advantage for businesses in the 21st century. The growing competition among enterprises to attract and retain skilled workers is driven by factors such as an aging workforce and the transition to a knowledge-based economy (source). This underscores the importance of implementing effective talent management practices to gain a competitive edge in the evolving labor market.
Sakinah, M. Z. (2016).	The role of E HRM in modern recruitment: A case study analysis.	The study explores the impact of E HRM, specifically E recruitment, on modern employee recruitment and selection.

		Online recruitment offers a diverse pool of candidates, but ensuring quality is a challenge. Organizations must adopt a diversified recruitment strategy beyond online recruitment to provide candidates with multiple job opportunities.
Ajunwa, I., Crawford, K., & Ford, J. (2016)	Platform authoritarianism: The implications of automated hiring for the future of work. New Media & Society	The Automated Hiring Platform (AHP) by retailers like Target is a prime example of platform authoritarianism, where automated platforms have control over users and their data. Candidates must undergo lengthy procedures, including work history, background checks, and personality tests, which are quickly processed and analyzed. This structure restricts

		applicants' autonomy while providing businesses with valuable insights. AHPs are prevalent due to the data-driven workplace restructuring and represent a shift in employment practices, particularly in remote recruitment. Despite their efficiency, these platforms raise questions about autonomy and control.
Kokkodis, A., Papadimitrio, A., & Ipeirotis, P. (2015)	Understanding hiring behavior on online labor markets: Insights from probabilistic models.	The study introduces probabilistic models for estimating freelancer hiring probability in online labor markets. Tested on oDesk.com, the models showed superior performance, with factors like previous collaboration, detailed profile information, specific skills, and quick

		application speed correlated with higher hiring probability. These models could help employers and freelancers improve their chances of hiring.
Toresh, S., & Almari, R. (2015)	Factors influencing effectiveness of online recruitment: A comparative study. Journal of Applied Human Resource Management	The study explores the attraction of online recruitment to job applicants, highlighting the importance of website design, interactive features, employer reputation, and job details. It suggests organizations can enhance recruitment by emphasizing website appeal, consistent information updates, and credibility.
Lim, S., Lee, A., & Lee, Y. (2015)	Changes in job applicant qualifications due to online recruitment. Journal of	Online platforms have become crucial in modern hiring procedures due to digital advancements. They replace traditional methods

	Applied Psychology.	like newspaper ads and bulletin boards, allowing firms to reach a wider candidate pool, increase efficiency, and streamline the recruitment process.
Mansourvar, M., & Yasin, S. (2014).	Enhancing Job Portal Effectiveness: Recommendations from the European Commission. Journal of Employment Strategies.	Online job portals simplify the job search process, allowing for more informed decision-making. They align job requirements with applicants' qualifications and skills, offering similar matches. The European Commission recommends these portals have a searchable database, CV submission facilities, email alerts, career advice, application management, and online contact with potential job seekers.

| Karakanian, 2000 Stanton & Coovert, 2004 | The impact of electronic human resource management on human resource management. International Journal of Human Resource Management | Research studies reveal that technology has significantly improved HR functions, making recruitment more efficient and cost-effective. Implementing applicant tracking systems and online job boards has revolutionized talent attraction and hiring, reducing time-to-hire and recruitment costs. Digital assessments and video interviews enhance candidate evaluation and cultural fit. |

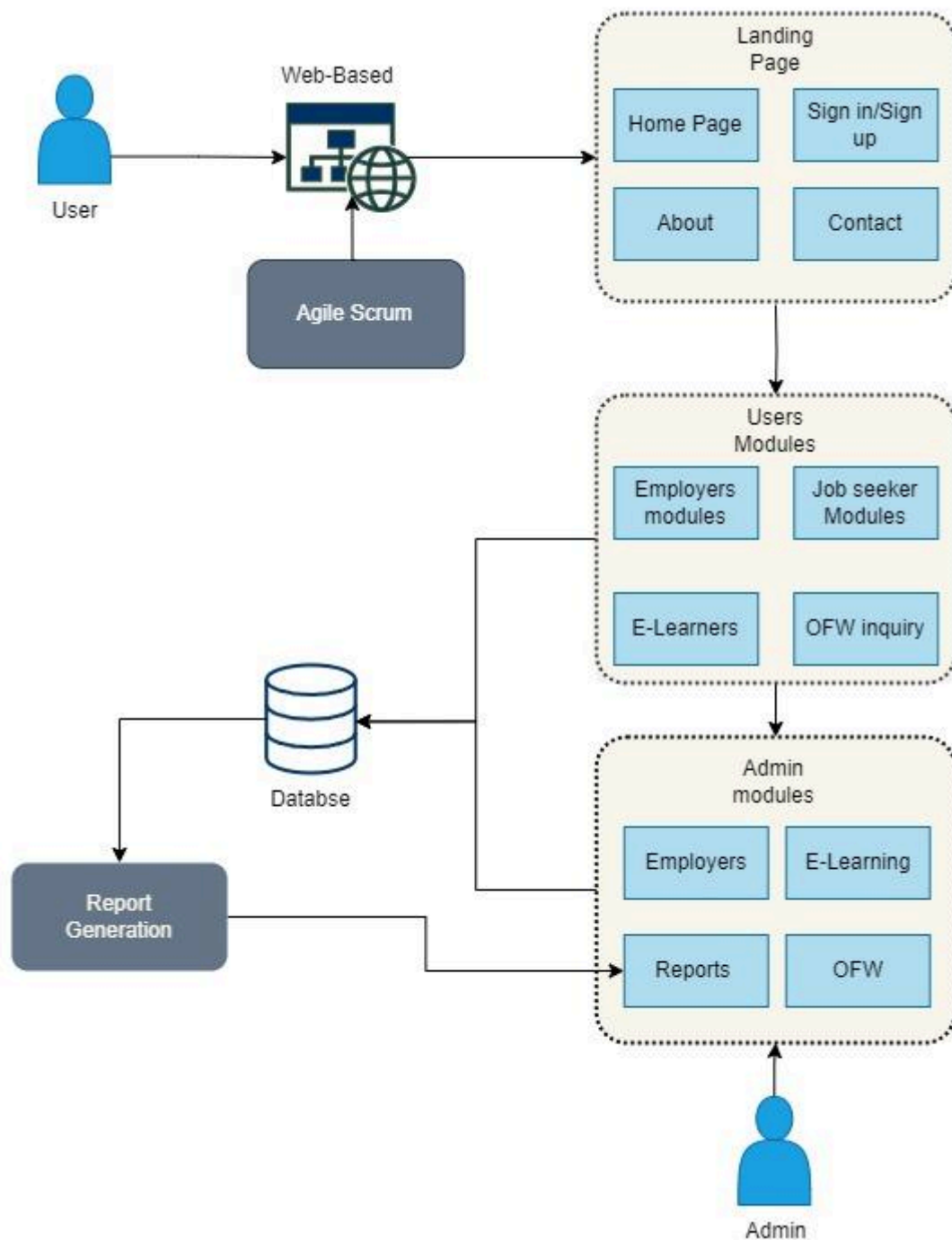Table 1. Literature Matrix

Conceptual framework

Figure 1. Conceptual Framework

This figure shows the conceptual framework of the peso online portal system, this shows the process by which users interact with the web-based system going to the admin response with the system. The framework starts by

the users going to the website and signing in or signing up an account, then viewing the services that web-based has such as job hiring, job application, e-learners and OFW inquiry. Once the user uses the services the data they send will go in the database and will be sent to the admin. The admin will respond with the user needs then it will be sent again to the users.

CHAPTER 3

METHODOLOGY

This chapter covers the project design, project development, and the software and hardware prerequisites necessary for system development.
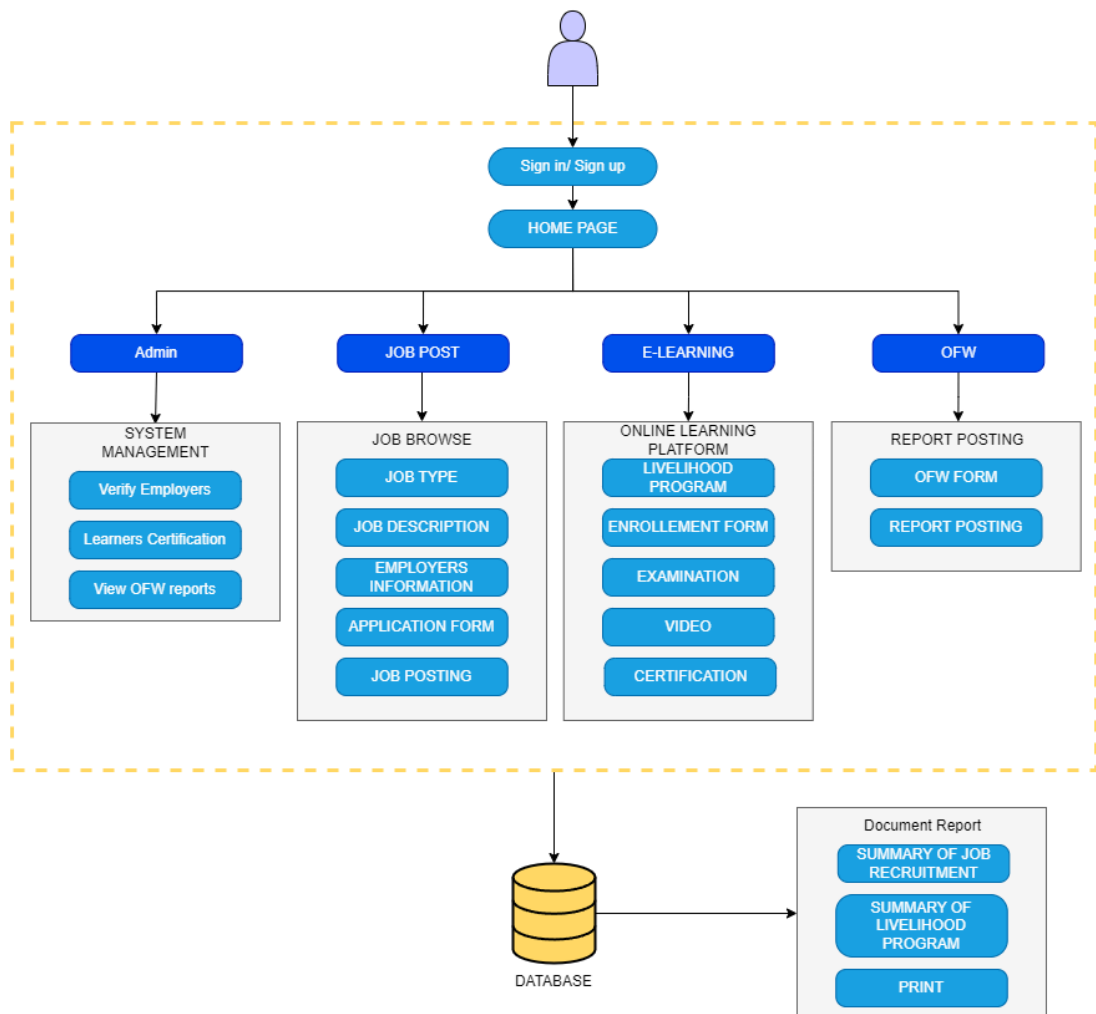
Project Design

Figure 2. System Architecture Diagram

The figure above shows the system architecture of the PESO website. The figure shows the people that will be using the website, which are the public users, employers, companies, or organizations that are hiring, and lastly, the admin, which is for members of the PESO. The normal user can be

people who are looking for a job, want to take a vocational course, or need some help from OFW. The system will consist of three main modules: one for job portals, one for e-learning, and one for OFW. The employers can post job openings in the job portal, but first they need to be verified by the PESO to see if they are legit. The PESO can post different learning materials for the user to view and study. They can also give tests and examinations for the users, and if they pass the examination, they will receive a certificate for finishing the courses. In the OFW section, users who are currently working overseas and facing difficulties can ask for help on the PESO website. The PESO will provide support and resources for OFWs in need, such as legal assistance, counseling services, and information on their rights as overseas workers. The platform will also have a forum where OFWs can connect with each other, share their experiences, and offer advice and support. Overall, the PESO website aims to be a comprehensive and user-friendly platform that caters to the needs of job seekers, learners, and overseas workers alike.
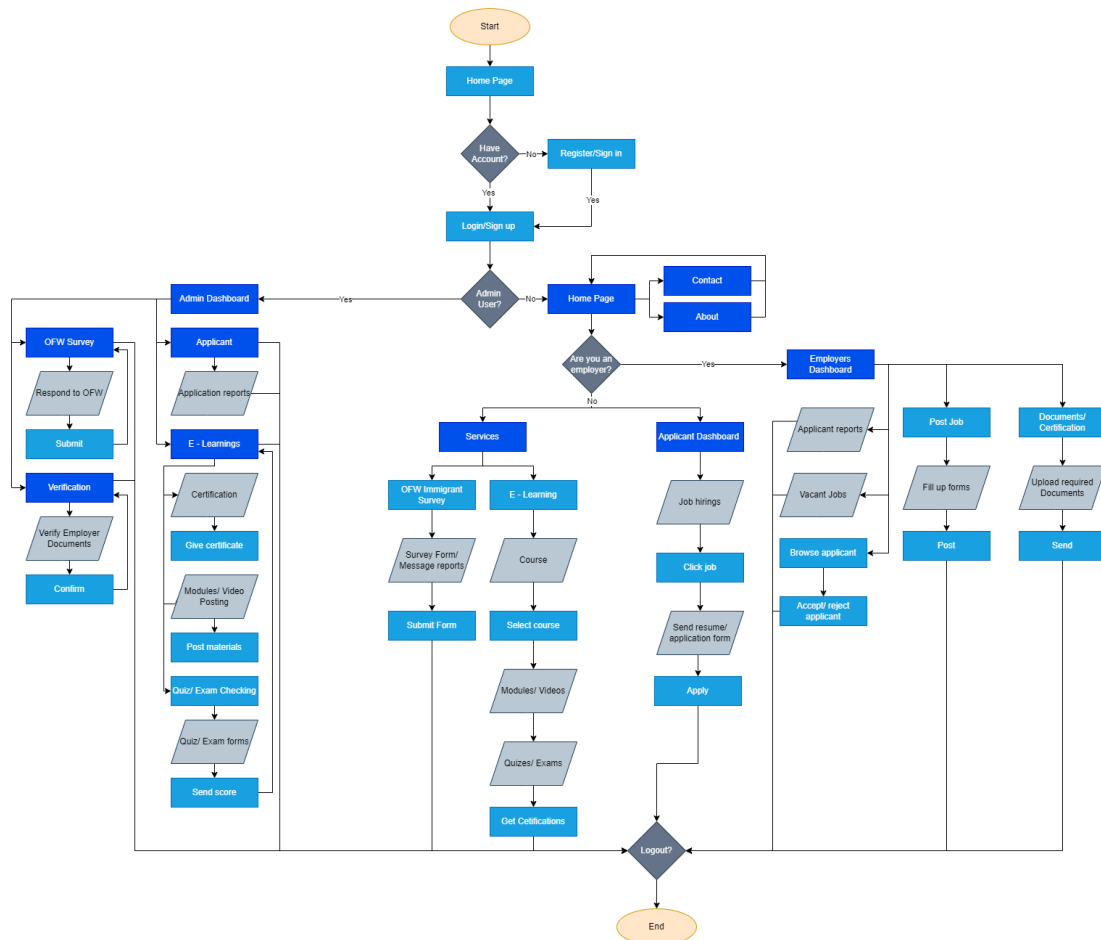
Flowchart

Figure 3. System Flow chart

This figure shows the flow of the system. It started with the home page or the landing page of the system, then the different login page for users. First, the public users. After they log in, they can choose which they want to use the website for. For example, if they are looking for a job, they can choose to go to the job portal, and if they want to enroll to the job portal, and if they want to enroll in a vocational course that PESO offers, they can go to E-Learning to get a certificate that they can show when applying for a job. But if they are OFW and they are having a problem with their work, they can go to the OFW page to make a report about their situation.

The PESO, who is also the administrator of the system, will help the users of the system. Just like on the OFW page, they help the OFW who are having problems. If they can solve the issue, they can fix it by themselves, but if not, the PESO will hand the case to a much higher government agency. In the job portal, the PESO validates and authenticates if the employer and employees are valid for applying for and posting for a job. This will make the system more trustworthy and usable for users.

Then we have the employers, who are the users that can post and create job openings. There are three types of employers that PESO allows in the system: companies, organizations, and individual employers. However, there are still requirements for the PESO to verify the user as an employer.

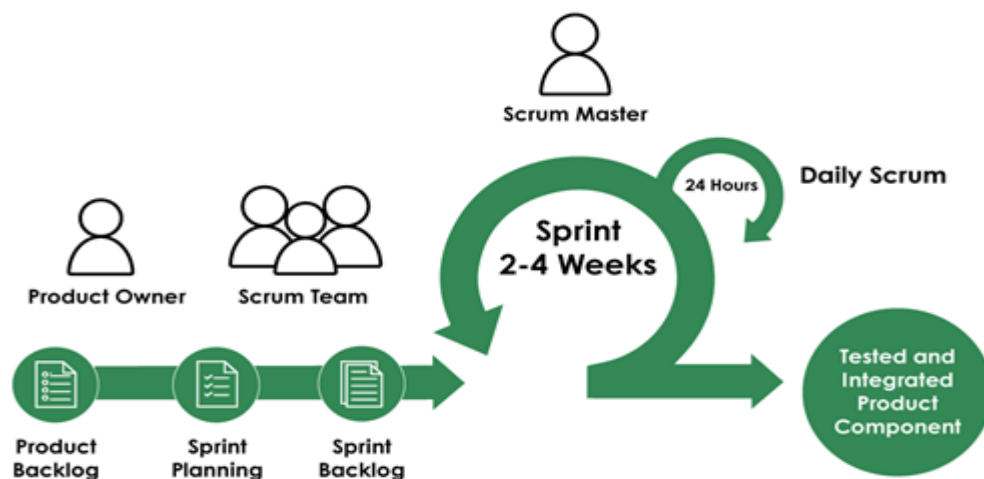**Software Development Life cycle**

Figure 4. Agile development model

The Agile Scrum Methodology improves the development of the PESO online platforms by enabling continuous improvement and adaptability to evolving requirements. The approach highlights the involvement of users and the consistent incorporation of feedback, which simplifies the process of

improving the functionality and interface of the system. This technique guarantees that the system maintains its relevance by properly integrating new features and mandates from law. The Agile Scrum methodology enables the development of an adaptable and responsive system that consistently exceeds or meets user expectations in the current environment.

Product Backlog

In this phase, this research determines the requirements and features of the system, which includes a list of things that need to be developed, beginning with the project's product backlog. This is the list of procedures needed for creating the software.

Table 2. Product Backlogs

Priority	Item	Estimated hour/s (per day)
Admin		
1	As an Administrator, I want to Login in the system.	1-2 Minutes
2	As an Administrator, I want to authenticate the users.	30-60 Minutes

Priority	Item	Estimated hour/s (per day)
Admin		
3	As an Administrator, I want to manage users	1-2 Hours
4	As an Administrator, I want to provide a certificate for the user that pass the e-learnings	1-2 Hours
5	As an Administrator, I want to be able to view OFW inquiries.	5-10 Minutes

This table outlines the admin capabilities within the system and also the corresponding usage time. The admin access the admin dashboard here he can go to the different sections of the system depending on what he needs to do, the admin can verify the documents that employers submitted, check the E-learning site and provide certificates for those who finish the modules, or view the reports of the OFW workers.

Table 3. Product Backlogs

Priority	Item	Estimated hour/s (per day)
User		
1	As a User, I want to browse job	5-10 Minutes
2	As a User, I want to apply for a job.	1 Hour
3	As a User, I want to enroll in online learning	1 Hour
4	As a User, I want to get certificate	1-24 Hours
5	As a User, I want to make an inquiry	1 Hour
6	As a User, I want to post job vacancies	2 Hours

In table 2 it shows the product backlog for users. It shows the capabilities of the user in the system and the allotted time for each function. there are my thing that the user can do in the system they can post job

vacancies, browser and apply for a job, they can also enter as a learner where they can enroll to a livelihood program and get certificate, and if they are OFW and needing of any assistance they can go to OFW section.

Sprint Planning

This research presents the priorities and discusses the sprint goals. It will be done via collaboration by the team. This research also creates a sprint backlog and selects the tasks that must be completed in order to develop the project.

Table 4. Sprint Backlogs.

Priority	Item	Task	Estimated hour/s (per day)
Admin			
1	As an Administrator, I want to access dashboard to see report on how many user have been employed and how many job vacancies are available	Design and develop the dashboard to show reports	24-48 Hours

2	As an Administrator, I want to verify the employers and employees, by checking their identity and credibility	Design and develop a page for view employer and employees information	48-96 Hours
3	As an Administrator, I want to check the users that are taking E-Leanings program and if the user has passed	Develop and design the page for managing the learner information and printing of certificates	96-192 Hours
4	As an Administrator, I want to manages the OFW inquiries and provides assistance for them	Design a page for managing OFW reports and information	48-96 Hours

The table shows the features and the admin needs to enhance the system. Admin needs to see the statistical report of job vacancies, accepted applicants, passed learner, and OFW reports. Also the admin can verify the

employer information and provide certification to the passers of the livelihood

program and also help the OFW workers

Table 5. Sprint Backlogs.

Priority	Item	Task	Estimated hour/s (per day)
User			
1	As a User, I want to browse jobs and apply	Design and develop the page for the list of jobs and application form	96-192 Hours
2	As a User, I want to post job vacancies that are available to the public. identity and credibility	Design and develop a form for putting in job vacancies	96-192 Hours

3	As a User, I want to enroll for an online learning course.	Design and develop E-learning.	96-192 Hours
4	As a User, I want to make an inquiry to ask for help	Design and develop a page for posting an inquiry	96-192 Hours

This sprint backlog shows the essential feature and user needs to enhance the system's functionality. Such as Job browsing and application, Job posting, enrolling for livelihood programs and posting a repost or asking help as OFW workers.

Use Case

Figure 5.Use case

The use case diagram shows all the different modules included in the

system. It also shows the connected user with each module and how the

admin accesses different pages of the system. The primary users of the system are jobseekers, learners, OFW workers, and employers. The system has three main modules such as the Job Corner, e-learning program, and the OFW service. There are also other modules such as the landing page and the Job posting page for the employers section. user can sign - in/ sign-up as a regular user or as an employer. The admin or the PESO is responsible for handling the verification, certification, and report analysis.

Materials

Software

VISUAL STUDIO CODE will be used as the development tool of the web application. This will be useful for the development process by offering a user-friendly interface and a wide range of extensions that enhance productivity and support various programming languages, and tools commonly used in web development.

HTML used for creating the structure and content of web pages. It defines the elements and their placement to ensure proper rendering in web browsers. It also serves as the backbone of web pages, defining elements such as headings, paragraphs, lists, and links.

JAVASCRIPT will serve as a fundamental tool in developing the web based-portal system. It played a crucial role in crafting interactive features essential for user engagement, including animations, pop-up menus, clickable buttons.

BOOTSTRAP. Bootstrap is a library of reusable HTML, CSS, and JavaScript code that forms the foundation for our e-justice system. It provides a flexible front-end programming framework, extensive pre-built components, and adaptable design elements that simplify development. Bootstrap ensures a

user-friendly experience, improves consistency and reliability, and speeds up development.

PHP will serve as the backend programming language to connect the web-based system to the server, enabling dynamic content generation, database interaction, and server-side processing. With PHP, developers can create reliable backend functionality to handle user authentication, data storage, and retrieval.

MySQL this tool will serve as the database of the system. It is a relational database which organizes data into tables consisting of rows and columns. This will be efficient to use for the system.

Hardware

Table 6. Hardware Specification

Components	Specification
Random Access Memory(RAM)	8gb
CPU	AMD Ryzen 3
Operating System(OS)	Windows 10 Home

The table shows the specification of the computer used to develop the system. The working computer is running on Windows 10 Home with 8gb installed RAM and using AMD Ryzen 3 with built in Radeon Vega Graphics.

Table 7. Minimum Requirements for PC/Laptop.

Components	Specification
Random Access Memory	4gb
CPU	At Least Ryzen 3/Core i5
Storage	At Least 4gb Storage
Operating System(OS)	Windows (32-bit or 64-bit)

The table shows the minimum requirements for Pc or laptop to run the system with smoothness. These specification requirements are put to ensure that the system will run without problem for the majority of users.

Table 8. Minimum Requirements for Mobile

Components	Specification
Random Access Memory	4gb
Processor	At Least Quad Core
Storage	At Least 3gb Storage
Android OS	Atleast Android 8

The table shows the minimum requirements for mobile phones to run the system with smoothness. These specification requirements are put to ensure the system will run without problem for majority users.
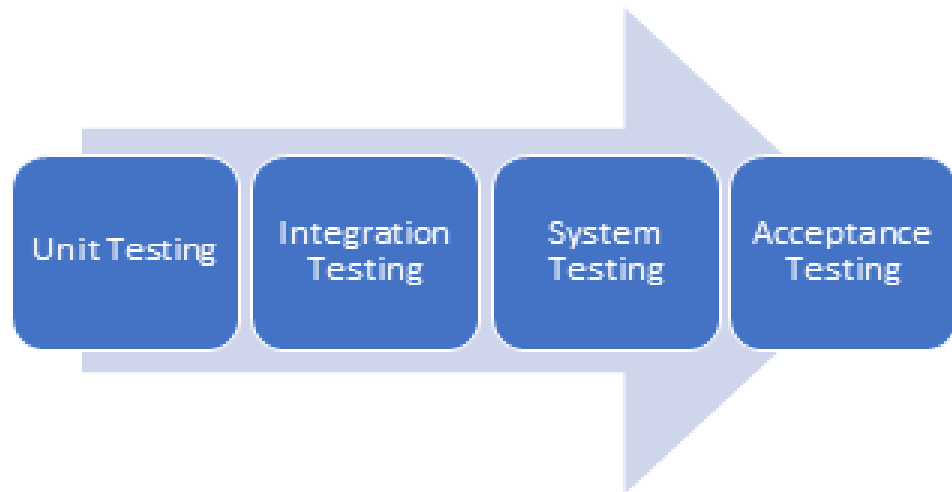
Project Testing and Debugging

Figure 6. Project Testing and Debugging

In Project Testing and Debugging, the researcher will utilize different tests to create this project. It is used to identify the bug and avoid failure before delivering the system.

The researcher is going to use different testing, which include Unit Testing, Integration Testing, System Testing and Acceptance Testing to assure the quality and dependability of the project.
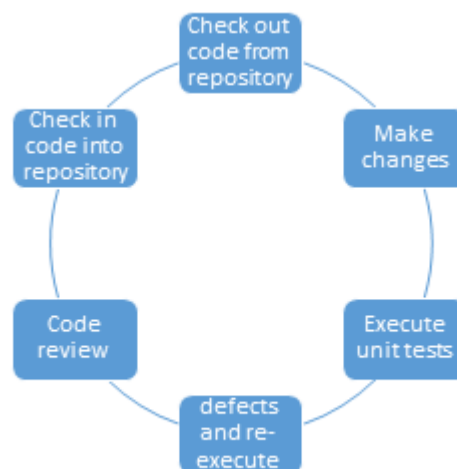
Unit Testing

Figure 7. Unit Testing

Unit testing is a technique where individual units or components of a software program are tested. The researcher specializes in testing the specific components or units of code, such as function, method and classes to check that all are working appropriately.
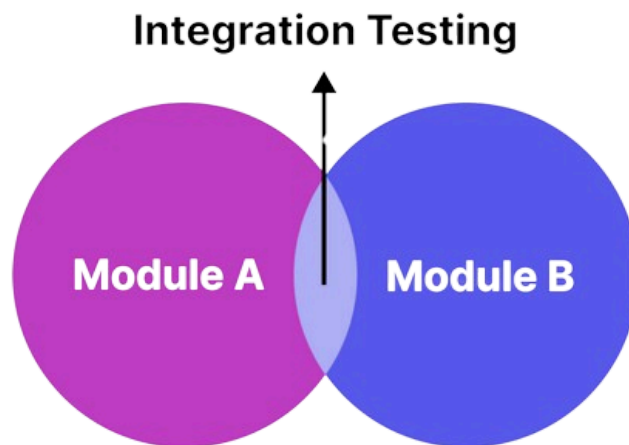
Integration Testing

Figure 8. Integration Testing

Integration system is a software testing in different types of units, where the different modules or units are tested.

Compatibility Testing

Figure 9. Compatibility Testing

This research will check the compatibility of systems on any distinct devices including Android and also with different browsers, such as Firefox, Chrome, and other browsers.

System Testing

Figure 10. System Testing

Load testing. This is where the researcher will test the performance of the system to check for performance issues such as system crashes and slow response time and how fast can be processed.

Stress testing. Stress testing is where the researcher will test the number of users that the website can handle. The researcher will do this by accepting multiple numbers of users.

Acceptance Testing

Is a testing that researchers will use to assure that the system will be approved by the user. The researcher deploys the software to the user then collects the feedback and implements the improvements to the system.
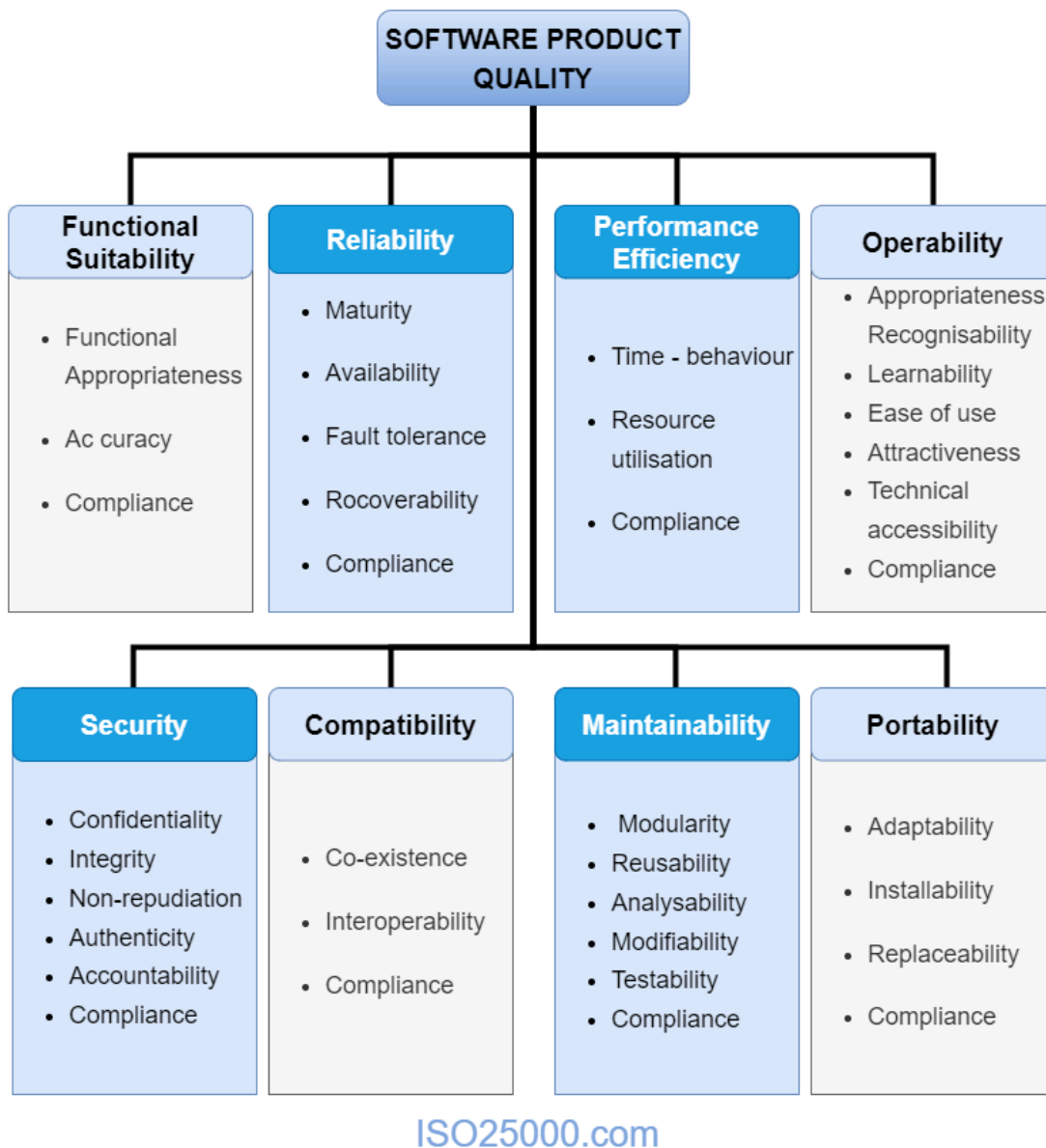
Evaluation Procedure

Figure 11. ISO 25010 software Quality Model Characteristics

The image presents a structured overview of the ISO 25010 standard that provides a framework for evaluating the attributes that make software reliable, secure, usable, and meet the requirements of clients and users. It is used to guide the development and assessment of software throughout its lifecycle, ensuring it satisfies quality standards. The model categorizes software quality into eight main factors:

Functional Suitability. It is one of the most important components of software since it must meet the user's requirements as well as expectations. The researchers will be able to show the system and address the issue identified by the user. It leads to the user's confirmation that the system is successful and efficient.

Performance Efficiency. The system must assure consumer pleasure by checking whether the site can operate correctly in various browsers, operating systems, and systems.

Usability. The user must understand how to use and benefit from the software. A wide range of concerns must be considered by software designers, including the system's user interface, navigation, terminology, and general design. An important component of usability is ensuring that the software's usage and usefulness is quickly clear to users. It indicates that the system must be basic and uncomplicated, with conspicuous navigation menus, easily identifiable buttons and icons, and simple, straightforward methods.

Reliability. During a certain period, a system's functions are correctly being used by the users. A chance that a system will execute its intended function successfully for a specified amount of time or will run without failure in a specific environment. Determine the possibility of any operational disruption to your systems.

Maintainability. The possibility of executing a successful repair process within a certain time. This technique attempts to increase the effectiveness

and efficiency of maintenance for users. This also describes how fast the system can be repaired, which influences the downtime patterns.

Portability. The system is simple to use for all users. In this instance, it helps anyone transferring new software versions across environments by saving time and mental strain.

Population of the Study

The project study includes a variety of individuals who will interact with the web-based portal in different ways. The primary users are community members, including job seekers, learners, and overseas Filipino workers (OFWs). These individuals utilize the system for accessing job opportunities, engaging with e-learning resources, and reporting relevant information about overseas work.

Employers or companies will also use the portal to post job openings, review applications, and connect with potential candidates. These include job recruiters and HR personnel from different businesses within Los Baños and the surrounding areas.

The administrators and trainers from PESO Los Baños play a crucial role in managing the system. Administrators oversee system operations, managing the data across different parts of the website, while trainers upload e-learning modules, conduct video training, and provide certificates to successful learners.

While the system is primarily designed for authorized personnel, interest from the general public is recognized. People may view the system to

explore job listings, learn about local training opportunities, and access resources for OFWs. However, access is limited to ensure the system's integrity and security, protect sensitive information, and maintain operational efficiency. The approach seeks to balance openness and security, catering to the needs of the system's public and authorized users.

Sampling Design

The survey will utilize purposive sampling, a non-probability technique that involves the careful selection of participants based on their assessment and accessibility. The survey will include a total of 50 participants, consisting of 20 job seekers, 20 employers, and 10 IT experts who are knowledgeable about the web-based system under investigation. Purposive sampling was chosen to ensure that the survey captured insights from these specific groups, allowing for target data collection and a comprehensive understanding of the research topic.

CATEGORY OF RESPONDENTS	SAMPLE
Job seekers	20
Employees	20
IT experts	10
Total	**50**

Table 9. Respondents of the Research Project

Table 9 displays the composition of respondents engaged in assessing the system. This table categorizes the respondents into three groups: IT Experts, employer, and job seekers, with a sample size of 10 IT Experts, 20 employers, and 20 job seekers, totaling 50 participants. The evaluation procedure will be undertaken by these respondents concentrating on examining the feasibility, performance, and features of the proposed web-based system. Specifically, IT Specialists, with their skill in web-based systems, will provide critical analysis of the system's functionality, contributing to a complete assessment of its technical capabilities.

Data Collection Instrument

The data for the project's results will be collected through a survey and questionnaire. The web-based system will be constructed using the information gathered from respondents in a questionnaire survey distributed by developers. The development of the web-based system will rely on data that will be gathered from respondents through a questionnaire survey distributed by developers, guaranteeing a solid foundation for project outcomes.

To gather data for the study, interviews will be conducted in addition to surveys. To create a plan that will suit the requirements and preferences of the users, the interview questions will be formulated. To ensure that the web-based system's features and design satisfy end-user needs, these questions will focus on those aspects. Surveys will be distributed among the

participants to assess the system. The first set will consist of five questions, focusing on how well the program meets user demands. Design portability, accessibility, data relevance, and the portal's easily identifiable interface will be examined in these questions. The criteria and attributes listed in the ISO 25010 software evaluation will serve as the foundation for the second set of questions. Physical copies, as well as Google Form surveys, will be employed.

Statistical Treatment

The collected data from the target respondent pool underwent analysis using a combination of population and purposive sampling techniques. This approach will enable a comprehensive evaluation of the system's functionality and overall performance during the development process. By employing both population and purposive sampling, a representative sample from the target respondent pool will be obtained, allowing for a thorough examination of diverse perspectives. This method is expected to facilitate the testing and evaluation of the system's functionality and performance, while also providing valuable insights into specific user preferences and requirements. These insights will play a crucial role in informing a more tailored and user-centric development approach.

CHAPTER IV

RESULTS ChapterAND DISCUSSION

This chapter outlines the results and provides a discussion that supports the methods employed to achieve the objectives.

Results by Objectives of the Study

The study aims to develop a web-based portal to improve PESO Los Baños, Laguna's services by connecting job seekers with employers, providing E-learning for skills and certifications, and tracking OFW employment. This will simplify job matching, enhance skills development, and offer better support for OFWs.

Figure 12. Database Schema

Figure 13. Registration Module

Test and Evaluate the Software using ISO 25010

Table 11. Results of Beta Testing answered by the IT Specialists

ITEM	MEAN	INTERPRETATION
Admin-Based		
Function Appropriateness (a)		
Function Appropriateness (b)		
Functional Accuracy (a)		

Functional Accuracy (b)

Functional Accuracy (c)

Functional Completeness

User-Based

Function Appropriateness

Functional Accuracy

Functional Completeness

Time Behavior

Resource Utilization

Co-Existence

Interoperability

Appropriateness Recognizability

Learnability

Operability

User Error Protection

User Interface Aesthetics

Maturity

Fault Tolerance

Recoverability

Confidentiality

Integrity

Non-Repudiation

Accountability

Authenticity

Analyzability

Modifiability

Modularity

Testability

Adaptability

Installability

Replaceability

Overall Weighted Mean

___

N_r = 3 IT Experts

Results of Survey Answered by the Respondents using TAM

Table 12. Evaluation of Perceived Usefulness by PESO Employees (Admins)

ITEM	MEAN	INTERPRETATION
I find the web based portal easy to use.		
Logging into the system is easy and secure.		
I can easily find what I need in the system.		

I can easily check and verify applicants and employer documents.

The system is suitable for people whoaren't tech-savvy.

The system operates quickly.

I feel that using the web based portal for legal information is safe.

I feel safe using the system overall.

Handling legal documents and finding case information is easy.

I receive timely updates about cases and deadlines.

I trust the information in the system.

Overall Weighted Mean

N$_r$ = 40 Barangay Employees

Results of Unit Testing

Integration Testing Results

CHAPTER V

SUMMARY, CONCLUSION, AND RECOMMENDATION

Summary

The E-Labor project focuses on developing a web-based portal management system for PESO Los Baños to support job seekers, including Overseas Filipino Workers (OFWs), applicants, and individuals interested in e-learning opportunities. The system aims to enhance the job application process by offering a more accessible and user-centered platform. The development team built the system using Javascript,PHP,HTML,CSS ,and MYSQL, chosen

for their flexibility.reliability and compatibility.The Agile Scrum methodology was employed during the system's development, promoting a flexible and iterative process where features were built and refined based on continuous feedback and testing.

Conclusion

In conclusion, The E-Labor system,undergoes development through the following objectives.

1.Develop a module that will identify the supply and demand of manpower needed by the industries and employer.

This module was designed to allow PESO to better understand the current labor market trends, including the skills available among job seekers and the demands from various industries. It provides a platform for employers to post job vacancies and for applicants to match their qualifications with these job openings.

2. Provide an E-learning module for trainings, certifications and livelihood.

This module offers job seekers access to training programs and certification opportunities to build their skills and knowledge. The goal is to help individuals acquire relevant qualifications, whether they are entering the workforce for the first time, changing careers, or seeking to expand their expertise. The E-learning module also provides resources for livelihood programs, enabling users to explore entrepreneurial opportunities. Through this module, job seekers are given practical tools to enhance their capabilities.

3.Design a process for OFW migration monitoring the status of employment.

This module was developed to support Overseas Filipino Workers (OFWs) by providing a system that tracks their employment status throughout their migration journey. The module enables PESO to monitor the conditions of OFWs, from job placement to employment security, ensuring they are kept informed and supported during their overseas employment.

Recommendation

1. **Continuous System Updates and Maintenance**

   As technology evolves, it is essential to continuously update the system to ensure compatibility with new web standards, security protocols, and user expectations. Regular maintenance and updates should be scheduled to address potential bugs, improve system performance, and add new features based on user feedback and evolving needs.

2. **Expansion of Modules**

   While the current system incorporates modules for job seekers, employers, and trainees, additional modules could be introduced in the future to cater to other stakeholders. For example, adding a module for local government units (LGUs) to track employment trends or a module for businesses to manage internships and collaborations with training programs could be beneficial.

3. **User Training and Support Programs**

   To maximize the system's potential, it is recommended to provide comprehensive training sessions for PESO staff, employers, job seekers, and trainees. These sessions should focus on system navigation, module usage, and troubleshooting common issues. Additionally, the establishment of a dedicated support team or helpdesk would provide timely assistance to users facing challenges.

4. Data Security and Privacy Measures

Given the sensitive nature of the data being handled by the system, it is crucial to implement advanced security measures to protect user information. It is recommended to conduct regular security audits, use encryption for data storage and transmission, and ensure compliance with data privacy laws (e.g., the Data Privacy Act of 2012 in the Philippines).

5. Partnerships with Educational and Vocational Institutions

To enhance the e-learning and training modules, PESO should consider partnering with educational institutions and vocational training centers. These partnerships could provide updated course materials, certifications, and access to expert instructors, further improving the system's value to users.

6. Feedback Mechanism for Continuous Improvement

The system should include a built-in feedback mechanism that allows users (job seekers, employers, trainees, and PESO staff) to provide suggestions or report issues. This feedback would be invaluable for identifying areas for improvement and ensuring that the system remains user-friendly and effective.

By implementing these recommendations, the PESO web-based system can continue to evolve, offering enhanced support to job seekers, employers, trainees, and overseas Filipino workers. These measures will ensure that the system remains a vital tool for employment generation and skills development in the Los Banos and neighboring areas.

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