



**MAPÚA MALAYAN COLLEGES MINDANAO**

**A Student Information Prototype Evaluation with Modified TAM2 in a BARMM  
Tech-Voc Setting**

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# **A Student Information Prototype Evaluation with Modified TAM2 in a BARMM Tech-Voc Setting**

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A Thesis Report Submitted to the College of Computer and Information Sciences  
in Partial Fulfillment of the Requirements for the Degree

Bachelor of Science in Information Systems

Mapúa Malayan Colleges Mindanao

Davao City

January 2024

## APPROVAL SHEET

The thesis, entitled “**A Student Information Prototype Evaluation with Modified TAM2 in a BARMM Tech-Voc Setting**” Prepared and submitted by Group IS-003 consisting of **Alfred Ashley F. Andrion, Mohaimen L. Dampac, Abdul Aziz M. Uy** in partial fulfillment of the requirements for the degree of **Bachelor of Science in Information Systems** is hereby accepted.

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DEAN

## **ACKNOWLEDGEMENT**

The researchers extend their sincere gratitude to their research adviser, Mr. Martzel Baste, whose invaluable guidance and support were instrumental throughout this project. His expertise, feedback, and encouragement significantly influenced the research direction and spurred the authors towards completion.

Special appreciation goes to Mrs. Flora Uy Salendab, LPT, RPh., for her multifaceted role as School Head, Mother, and Mentor. Her dedication to education and unwavering support have been a source of inspiration throughout this journey.

Engr. Neil Magloyuan, our Capstone Facilitator, deserves recognition for his support and assistance in navigating the complexities of the study. His feedback has been instrumental in refining our work.

We are grateful to Dr. Patrick Cerna, Panel Chair, for his valuable contributions during the defense process. We also extend our appreciation to Dr. Genevieve Pilongo and Prof. Mary Grace Sandoval, additional Panel Chairs, for their crucial roles in the evaluation process and their insightful feedback that helped refine our research.

Mapúa Malayan Colleges Mindanao deserves special recognition for providing the necessary resources and opportunities to conduct this research. The College of Computer and Information Science department's support and assistance were pivotal in the successful completion of this project. The researchers are grateful for the privilege to study and conduct research at this esteemed institution.

The researchers express deep gratitude to their families for their enduring love and unwavering support. Their belief in the researchers and constant encouragement served as a beacon of inspiration, driving them towards their goals. The researchers are fortunate to have such understanding and supportive families by their side.

Additionally, the researchers acknowledge the contributions of their colleagues and friends who provided valuable feedback and suggestions throughout the research process. Their insights and discussions were instrumental in refining ideas and enhancing the quality of the work. The researchers are grateful for the supportive and talented community surrounding them.

Finally, the researchers extend sincere appreciation to all those who contributed to the completion of this project, making it possible through their support, guidance, and encouragement.



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## LIST OF ABBREVIATIONS

COVID-19	Coronavirus Disease
ANOVA	Analysis of variance
BTES	Buluan Technical Educational School
CFA	Confirmatory Factor Analysis
DBMS	Database Management Systems
DSES	digitalized student enrolment system
ESC	Educational Service Contracting
ICT	Information and communications technology
IMS	Information Management System
IT	Information Technology
MS	Microsoft
OECD	Organization for Economic Co-operation and Development
PC	Personal Computer
PEOU	perceived ease of use
PU	perceived usefulness
SPSS	Statistical Package for the Social Sciences
TAM	Technology Acceptance Model
TAM2	Technology Acceptance Model 2
Tech-Voc	Technical-Vocational
TESDA	Technical Education and Skills Development Authority
TRA	Theory of Reasoned Action
UI	User Interface
UX	User Experience

## ARTICLE 1

### **A Student Information Prototype Evaluation with Modified TAM2 in a BARMM Tech-Voc Setting**

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**Abstract**

The rapid integration of technology in educational institutions is transforming administrative processes and enriching learning experiences globally. At Buluan Technical Educational School (BTES), a TESDA-accredited institution, the increasing student enrollment and administrative complexities necessitated the transition to a digitalized student information system. This research investigated the acceptance of this prototype system among administrative staff and students enrolled in TESDA-accredited courses at BTES. Utilizing the Technology Acceptance Model 2 (TAM2) as a theoretical framework, the study employed a cross-sectional survey design to assess stakeholders' perceptions of ease of use, perceived usefulness, attitudes, and intentions towards using the system. The findings addressed a gap in the literature regarding technology acceptance within the Filipino Tech-Voc school setting, providing valuable insights to inform decision-making processes for successful system implementation and enhancement of a user-centered educational environment for all stakeholders.

**Keywords:** Digitalized student information system, User acceptance, TAM2 (Technology Acceptance Model 2), Tech-Voc school, BARMM, Cross-sectional survey, User interface, Perceived ease of use, Perceived usefulness

**SDGs:** SDG 4 Quality Education, SDG 10: Reduced Inequalities

## **1. Introduction**

The transformative influence of technology on education is indisputable, reshaping the dynamics of institutions and student learning globally (Barrett et al., 2015). As educational institutions worldwide embrace digital solutions to optimize administrative processes and foster enriched learning environments (Alenezi, 2023), the advent of a digitalized student enrollment system stands out as a significant innovation. This system streamlines enrollment procedures, alleviating administrative burdens and ensuring a seamless educational journey (Muhafidin, 2020).

Buluan Technical Educational School (BTES) is at the core of this technological evolution. This remarkable institution has evolved since its establishment in 2004. Originating as a modest establishment focused on kinder education, BTES has transformed into a comprehensive tech-voc school, offering K-12 education alongside TESDA-accredited courses. This transformation underscores BTES's unwavering commitment to providing a diverse student body with quality education.

However, a pressing challenge emerged with BTES's continued growth and development. The recent increase in student enrollment has significantly strained its capacity and overwhelmed its manual enrollment and bookkeeping system. As the school plans to operate on a larger scale and undergo overall improvements, it has become evident that a modernized approach to efficiency and compliance with governmental requirements is necessary. Implementing an Information Management System (IMS) has become imperative to ensure accurate records and the continuity of student benefits.

In this context, this research aimed to assess the acceptance of a digitalized student information system among three vital stakeholder groups: administrative staff and students,

focusing on TESDA-accredited courses. The researchers used a system prototype and questionnaires to understand the stakeholders' perspectives, perceptions, and attitudes. Mrs. Flora Uy Salendab, the school president, acknowledged the researchers' efforts in addressing one of the school's pressing issues.

The Filipino Tech-Voc School, a dynamic institution offering primary and secondary education alongside TESDA-accredited courses, recognizes the potential benefits of transitioning to a digitalized student enrollment system. However, the successful adoption of such a system relies on the acceptance and engagement of these critical stakeholders. Administrative staff must embrace technology for its practical use. As significant recipients, students need to find it user-friendly and valuable.

While the importance of technology acceptance in educational settings continues to grow, the research conducted within the distinctive context of the Filipino Tech-Voc School in Maguindanao still needs expansion. Specifically, more studies need to address perceived usefulness, ease of use, intention to use, and the impact of external factors on acceptance among these diverse stakeholder groups. Because of its extensive framework and close alignment with the context and objectives of analyzing the acceptance of the digitalized student enrollment system at the Filipino Tech-Voc School, TAM2 was chosen and adapted for this study. With its three primary constructs—Perceived Usefulness, Perceived Ease of Use, and Intention to Use—TAM2 systematically assesses stakeholders' attitudes and plans around system adoption. A more in-depth investigation of the social, contextual, and observable factors impacting system acceptance within the school community was made possible by including External Factors, Subjective Norms, Role Relevance, and Result Demonstrability.

Given the emphasis on understanding the perceptions and intentions of stakeholders, including admin, staff, and students, regarding the digitalized enrollment system, TAM2's focus on individual beliefs and social influences is particularly relevant. By incorporating these constructs, the modified TAM2 framework facilitates a comprehensive analysis of the factors driving or hindering system adoption. It offers valuable insights for enhancing its effectiveness and acceptance within the school context.

Furthermore, the model's adaptability and robustness, as evidenced by its successful application in various domains, makes it a suitable choice for investigating technology acceptance in the specific context of a tech-voc school. The modified TAM2 framework, tailored to accommodate the unique characteristics and requirements of the digitalized enrollment system at the Filipino Tech-Voc School, serves as a valuable tool for guiding research and informing strategies aimed at promoting the successful implementation and utilization of the system within the school community.

The decision to adapt and utilize a modified version of the Technology Acceptance Model 2 (TAM2) in this study is grounded in its robust theoretical framework and its alignment with the specific context and objectives of analyzing the acceptance of a student information system prototype at the Filipino Tech-Voc School. This study's significance extends beyond the immediate context of BTES Life to areas like the Bangsamoro Autonomous Region in Muslim Mindanao (BARMM) and small Muslim communities in the countryside of Mindanao. These regions often face unique challenges in accessing and adopting technology, and the successful implementation of digital solutions in these communities can contribute to bridging the digital divide and advancing educational opportunities for marginalized populations. By assessing the level of acceptance of a



digitalized student information system within BTES Life, this study provided valuable insights that can inform the development of tailored solutions and strategies to promote technology adoption in similar educational settings across BARMM and rural Mindanao.

Firstly, TAM2 offers a comprehensive framework that accounts for individual beliefs and social influences, making it particularly suitable for understanding the complex dynamics of technology acceptance within organizational settings. In the context of a tech-voc school like the Filipino Tech-Voc School, where stakeholders such as administrative staff and students play crucial roles in the adoption and utilization of technology, TAM2's focus on individual perceptions (Perceived Usefulness, Perceived Ease of Use, and Intention to Use) and social factors (External Factors, Subjective Norms, Role Relevance, and Result Demonstrability) provides a methodical approach to assess stakeholders' attitudes and intentions towards system adoption.

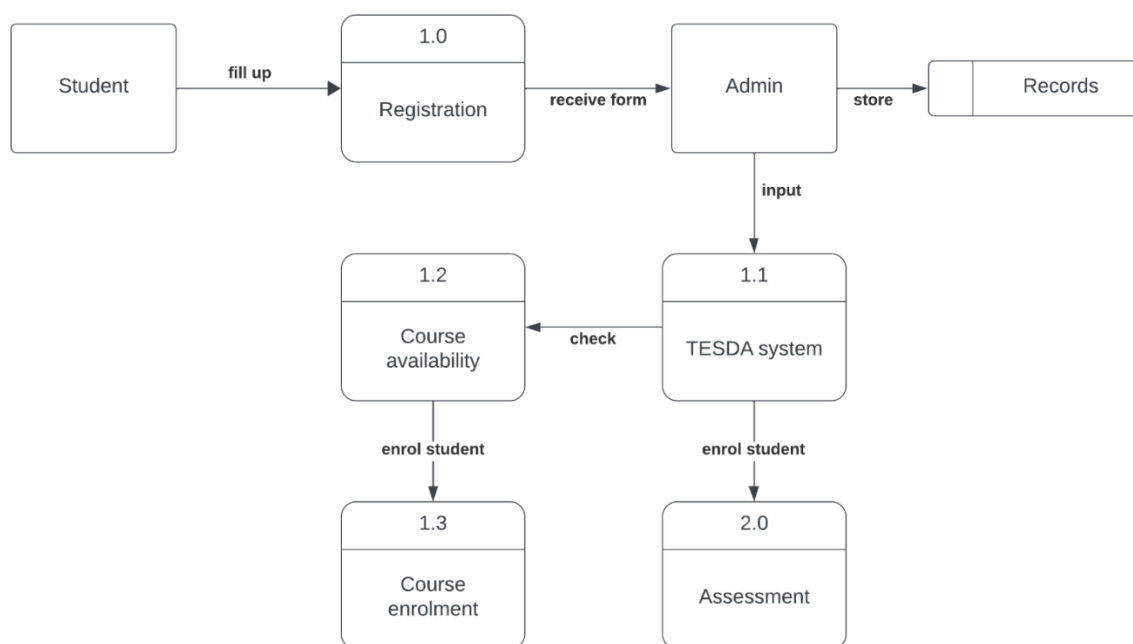
Also, the modified TAM2 framework allows for a more nuanced analysis of the factors influencing system acceptance within the school community. The modified framework enables a deeper exploration of the social, contextual, and observable factors impacting system acceptance by incorporating additional constructs such as External Factors, Subjective Norms, Role Relevance, and Result Demonstrability. It is imperative in a tech-voc school, where unique organizational dynamics and stakeholder relationships may influence technology adoption processes.

Moreover, TAM2 has demonstrated adaptability and robustness across various domains and contexts, making it a suitable choice for investigating technology acceptance in the specific context of a tech-voc school. Previous research has shown the effectiveness

of TAM2 in predicting and explaining technology acceptance behaviors, indicating its applicability and relevance to the current study.

In summary, the researchers justified using a modified version of TAM2 in this study based on its extensive theoretical framework, its alignment with the specific research objectives, and its demonstrated effectiveness in predicting technology acceptance behaviors across diverse organizational settings. By incorporating TAM2 constructs and adapting them to the unique characteristics and requirements of the digitalized enrollment system at the Filipino Tech-Voc School, the modified framework served as a valuable tool for guiding research and informing strategies to promote the successful implementation and utilization of the system within the school community.

### Assessment of Current System and Challenges



**Fig. 1.** Data Flow Diagram of Current Enrolment Process. In the current enrollment process of BTES, all tasks are performed manually, primarily by administrative personnel who operate the TESDA Training Management Information System for student enrollment. The process begins with students filling out registration forms and submitting necessary identification documents, such as birth or marriage certificates. These documents are then

compiled by administrative staff, and once completed, another designated administrator inputs each student's information into the TESDA system for registration. Following registration, administrators wait for announcements from the provincial office regarding course offerings for TVET courses offered by the school. Once available, administrators enroll students in their respective courses. After training, administrators enroll students for assessments using the TESDA system.

Recent discussions with the school president revealed several pressing challenges within the current operational framework of the educational institution. These challenges notably included the tedious and slow nature of existing processes, enrollment limitations, and classroom shortages, hindering the school's capacity to provide quality education. Additionally, employees' multitasking and inefficiency reduced productivity, increased stress levels, compromised work quality, and caused difficulties maintaining work-life balance. Document management issues, including physical storage constraints and digital organization concerns, contributed to operational inefficiencies, hindering document handling and retrieval. Moreover, enrollment procedures required streamlining and modernization to address administrative burdens and resource inefficiencies. Lastly, scheduling payment dates that did not align with parents' financial capabilities and manual computation of student balances introduced complexities and delays within the financial processes of the institution.

Consequently, this study aimed to gauge the level of acceptance among the school's stakeholders for the soon-to-be-implemented IMS. The study identified the factors affecting the likelihood of technology acceptance success for the IMS through a prototype demo, starting with the school's enrolment process. Below were the specific problems faced by the institution:

**Enrollment Limits and Classroom Shortages:** These challenges affected the school's capacity to provide quality education, resource allocation, financial sustainability, and overall satisfaction among parents and the community. Addressing this issue may require short-term measures to optimize current resources and long-term facility expansion and enrollment management strategies.

**Multitasking and Inefficiency Among Employees:** Multitasking and inefficiency among employees can lead to reduced productivity, increased stress levels, compromised work quality, and challenges in maintaining work-life balance. Addressing this issue may involve reevaluating workload distribution, providing training on time management, and promoting a workplace culture that values focused and efficient work.

**Document Management Issues:** Document management issues, including physical document storage constraints and digital organization concerns, led to operational inefficiencies. Implementing efficient document management systems, both physical and digital, can streamline document handling, storage, and retrieval, ensuring compliance with legal and regulatory requirements.

**Enrollment Process Inefficiencies:** Streamlining and modernizing enrollment procedures were essential for improving the overall functioning of the educational institution. It can lead to enhanced efficiency, reduced administrative burden, improved parent and student satisfaction, and better utilization of resources. Implementing digital enrollment solutions, clear communication, and automation can effectively address these challenges.

**Difficulty Inputting Information into a Computer:** A database program needed to improve the efficiency of data management and retrieval and introduces logistical

challenges related to physical space and associated costs. Implementing an Information Management System (IMS) would centralize and digitize student records, making data input and retrieval more efficient, cost-effective, and secure.

The Technology Acceptance Model 2 (TAM2) offers a suitable framework for assessing the acceptance of the proposed student information system prototype at BTES. TAM2 provides a comprehensive framework that considers key factors influencing technology adoption, such as perceived usefulness, ease of use, and intention to use. By adapting TAM2 to incorporate additional constructs relevant to the school's context, such as external factors and role relevance, the modified framework offers a methodical approach to understanding stakeholders' attitudes and plans regarding system adoption. This tailored approach ensures that the assessment captures the unique considerations and challenges faced by BTES, making it an appropriate tool for evaluating the acceptance of the student information system prototype.

The president of BTES and stakeholders recognized the necessity of innovation in the current process and have decided to implement a student information system for further growth and development. Considering the institution's decentralized expansion, this research is pivotal for streamlining and ensuring efficient operations.

### **Research Questions and Objectives:**

These research questions systematically guided the study in investigating critical aspects related to the acceptance of the digitalized student information system among various stakeholder groups while considering the influence of external factors:

1. How do stakeholders perceive the usefulness and ease of use of the student information system prototype at the Filipino Tech-Voc School?

2. Are the intentions of stakeholders to use the student information system prototype affected by Perceived Usefulness and Perceived Ease of Use?
3. Are there significant differences in the student information system prototype acceptance levels between admins and students?
4. How do external factors, including Subjective Norm, Role Relevance, and Result Demonstrability, influence the acceptance of the student information system prototype system among stakeholders at the Filipino Tech-Voc School?

**General Objectives:**

To comprehensively assess and understand the acceptance dynamics of the student information system prototype among admin staff and students, within the context of the Filipino Tech-Voc School, this study investigated the perceived usefulness, ease of use, intention to use, potential differences in acceptance levels, and the influence of external factors on adopting the student information system, contributing to a holistic understanding of technology acceptance within the educational institution.

**Specific Objectives:**

1. To assess the usefulness and ease of use of the student information system prototype among the admins and students of the Filipino Tech-Voc School.
2. To explore the intention to use of the admins and students towards the student information system prototype.
3. To identify any significant differences in acceptance levels between admins and students.

4. To determine the influence of external factors, including Subjective Norm, Role Relevance, and Result Demonstrability, on the perceived usefulness of the student information system prototype.

### **Significance of the Study**

This research assessed the level of acceptance of a student information system prototype within the educational context of BTES Life in Buluan, Maguindanao, Philippines. By evaluating stakeholder acceptance rather than proposing a solution, this study would contribute valuable insights into the readiness and willingness of the school community to embrace technological advancements.

- **Understanding Stakeholder Acceptance:** The study sought to understand the perspectives and attitudes of stakeholders, including administrators, teachers, students, and parents, towards implementing a digitalized system. By gaining insights into their acceptance levels, the study would provide valuable information for decision-makers to assess the feasibility and potential challenges of adopting such technology.
- **Implications for BARMM and Small Muslim Communities:** Beyond its immediate context, this study had broader implications for areas like the Bangsamoro Autonomous Region in Muslim Mindanao (BARMM) and small Muslim communities in the countryside of Mindanao. These regions often faced unique challenges in accessing and adopting technology. By examining acceptance levels within BTES Life, the study would offer insights that can inform the development of tailored solutions and strategies to promote technology adoption in similar educational settings across BARMM and rural Mindanao.

- **Contributing to Educational Research:** This study would contribute to the broader field of educational research by shedding light on the acceptance of technology in educational institutions. The findings can inform future studies and initiatives to enhance technology integration and improve educational outcomes in diverse settings.

By assessing acceptance levels and considering the broader implications for BARMM and small Muslim communities in Mindanao, this study would provide valuable insights that can guide decision-making and promote technology adoption in educational settings.

### **Scope of the Study**

This research responded to the crucial need to digitalize enrollment processes and document management within BTES Life, an educational institution in Buluan, Maguindanao, Philippines. The primary focus was streamlining enrollment procedures, facilitating the efficient submission of required documents, and enhancing student records management.

The study would primarily concentrate on:

- **Enrollment Process Digitalization:** The complete digitization of the enrollment process, including submitting essential documents
- **Reviewing Student Records:** The system allowing authorized administrators to review and manage student records efficiently
- **Visibility of Documents:** Within the prototype of the Information Management System (IMS) module, digitalized documents such as the enrollment form, birth certificate, Form 137 (report card) for transferring students, a good moral certificate



for transferring students, and transcript of records (TOR) for transferring students will be made visible.

### **Limitations of the Study**

While this study addressed critical issues related to digitization in education, it was essential to acknowledge certain limitations:

- **Single-Site Study:** The research was conducted solely within the chosen school in Buluan, Maguindanao, Philippines. Therefore, the findings may only be universally applicable to some educational institutions.
- **Connectivity Challenges:** The effectiveness of the digital system may be influenced by internet connectivity availability in the region.
- **Digital Literacy:** The research acknowledged potential challenges related to users' digital literacy. To mitigate this, a step-by-step guide on using the website effectively within the prototype was provided.
- **Understanding Complexity:** The researchers recognized that some participants may encounter difficulties in fully comprehending the completion of student information within the digital system. The study considered this factor and offered the necessary support.

This research addressed specific challenges within the chosen educational institution, offering a digital solution to enhance enrollment processes and document management. While it recognized its limitations, it made valuable contributions to the education sector in Buluan, Maguindanao, Philippines.

## **2. Review of Related Literature**

### **Benefits and Challenges of Automation in Educational Institutions**

In recent years, school payment systems have significantly transformed, driven by a continuous influx of innovative solutions. These advancements have proven instrumental in supporting emerging educational practices, including online transactions, as referenced by Dahlberg et al. (2008), Humphrey (2004), and Khan et. al. (2017). The widespread integration of innovative technologies, such as enhanced internet connectivity and the prevalence of smartphones within the educational ecosystem, has further strengthened the adoption of these pioneering payment methods. Significantly, these payment innovations can potentially simplify financial processes in schools, offering faster and more secure payment methods. In turn, it can lead to cost efficiencies for educational institutions and increased operational effectiveness, as Hasan et. al. (2012) emphasized.

While the variety of available payment methods may offer additional benefits to users, specific consumers and potentially even businesses might need more time to adopt these innovations and face difficulties when trying to reduce their reliance on physical cash. Therefore, obtaining a deeper understanding of the factors associated with adopting innovative payment systems and their cost-effectiveness holds significance for policymakers, regulatory bodies, and socio-economic researchers, as Dennehy and Sammon (2015) underscored.

In summary, the evolution of school payment systems driven by innovative solutions and technological advancements holds the promise of streamlining financial processes in educational institutions, potentially leading to cost efficiencies and operational effectiveness. However, it is essential to recognize that adopting these innovations may

vary among stakeholders and pose challenges for those reliant on physical cash. Understanding the factors influencing technology acceptance in school payment systems is crucial for policymakers and researchers. The study at the Filipino Tech-Voc School, with its mixed-method approach, provided valuable insights into stakeholder attitudes, offering a comprehensive understanding of technology acceptance, and bridging the gap between theory and practice in the educational context. These findings would underscore the importance of adapting payment systems to meet the diverse needs of stakeholders in the ever-changing landscape of education.

### **Adoption of Educational Processing Systems**

Adopting educational processing systems depends on a user base comprising schools, parents, or students. While most existing research has focused on adopting these systems from the perspective of parents or students, there needs to be more information available about how educational institutions approach this. Harris et. al. (2011) studied the outlooks of a sample of Malaysian schools. They found that educational institutions are more likely to accept electronic processing systems when the perceived functionality, privacy, and security are deemed adequate.

In conclusion, the study's findings regarding educational institutions' acceptance of educational processing systems aligned with the broader context of technology acceptance within the Filipino Tech-Voc School. While existing research often focused on the perspectives of parents or students, this study takes a comprehensive approach by including admin staff, parents, and students as key stakeholders. The concurrent mixed-method approach used in this research enabled a holistic understanding of technology acceptance, which was crucial in bridging the gap between theory and practice in the educational

context. The insights from this study provided valuable information for decision-making and system refinement at the Filipino Tech-Voc School, emphasizing the importance of factors such as perceived functionality, privacy, and security in shaping technology acceptance within educational institutions. This research contributed to a more informed and user-centered approach to adopting educational processing systems, benefiting all stakeholders.

### **Technology Acceptance Models: A Review**

The Technology Acceptance Model (TAM) stems from the Theory of Reasoned Action (TRA) and aims to elucidate individuals' acceptance or rejection of information technology (IT). Developed as an offshoot of TRA, a well-established social psychology theory by Fishbein and Ajzen (1975) that focuses on explaining behavior through intentions, TAM has garnered recognition as a robust and concise model for predicting user acceptance (Venkatesh & Davis, 2000). Its primary purpose is to explore why users' attitudes and beliefs significantly impact their decisions to embrace or resist IT. TAM's fundamental goal is to shed light on the factors that underlie the adoption and utilization of IT.

TAM distinguishes itself from TRA by replacing several of TRA's attitude measurements with two pivotal technology acceptance metrics: ease of use and usefulness. According to TAM, these beliefs are intermediaries between external variables and an individual's intention to use a system. TAM asserts that individuals' perceptions of PU and PEOU shape their intention to use IT. Both TRA and TAM include robust behavioral components. Once an individual intends to act, they can proceed without significant constraints. However, it is essential to acknowledge that in the real world, various limitations, such as restricted freedom to act, may come into play (Davis et al., 1992).

In alignment with the systematic and user-centered approach of our research at the Filipino Tech-Voc School, it was crucial to recognize the Technology Acceptance Model's (TAM) pivotal role in our study. TAM, derived from the Theory of Reasoned Action (TRA), is the foundation for exploring technology acceptance among admin staff, parents, and students. By emphasizing the core factors of ease of use and usefulness, TAM provides a framework to understand stakeholders' attitudes and intentions regarding the digitalized student enrolment system (DSES) prototype developed using Figma. The concurrent mixed-method approach integrated quantitative data from structured surveys and qualitative insights from hands-on engagement and prototype testing. This holistic methodology bridged the gap between theory and practice, offering a comprehensive understanding of technology acceptance within the educational context of the institution. The study's results would inform decision-making and refinement of the DSES, ensuring it would align with the needs and expectations of our key stakeholders, enhancing the educational environment at the Filipino Tech-Voc School.

### **TAM2 Model: A Review of its Significance in Technology Acceptance Research**

The TAM2 model, strongly supported by four different organizations at various measurement points (pre-implementation, one-month post-implementation, and three months post-implementation), provides a comprehensive insight into the factors influencing perceived usefulness, explaining a significant 60% of the variance in this crucial driver of usage intentions. This model encompasses social influence processes, such as subjective norm, voluntariness, and image, and cognitive instrumental processes, including job relevance, output quality, result demonstrability, and perceived ease of use.

Furthermore, TAM2 extends the original TAM framework by highlighting subjective norms' substantial and direct role in usage intentions, especially in mandatory systems. This model's effects on social influence processes align perfectly with its theoretical foundations. Subjective norms impact perceived usefulness through internalization, as individuals integrate social influences into their perceptions of usefulness, and through identification, individuals use a system to enhance their status and influence within their work group, improving job performance (Mathieson, 1991). Notably, subjective norms also directly affect intentions for mandatory usage but not in voluntary contexts, shedding light on previous research that found the limited significance of social influences in voluntary scenarios (Davis et al., 1989).

In conclusion, both the Technology Acceptance Model (TAM) and the TAM2 model provided valuable theoretical frameworks for understanding technology acceptance, with a shared emphasis on factors like ease of use, usefulness, and the subjective norm. These models closely aligned with the research at the Filipino Tech-Voc School, where the study employed a structured and iterative approach to systematically investigate technology acceptance among admin staff, parents, and students. The study involved the development of essential tools, including a comprehensive survey questionnaire and an interactive digitalized student enrollment system (DSES) prototype created using Figma, facilitating the collection of quantitative and qualitative data. Through hands-on engagement via prototype testing and surveys, the study yielded insights related to perceived usefulness, ease of use, intention to use, and external factors. This holistic approach, guided by the principles of TAM and TAM2, bridged the gap between theory and practice, providing actionable recommendations for enhancing the educational

environment. The research would underscore the significance of ease of use, usefulness, and the role of social norms in shaping technology acceptance among key stakeholders within the school community. While both TAM and TAM2 emphasized factors like ease of use, usefulness, and subjective norm in understanding technology acceptance, TAM2 distinctively emphasized the subjective norm, particularly in mandatory systems, highlighting the role of social influence and external factors in shaping users' intentions.

### **Integration of Enrollment Systems in Educational Institutions**

Incorporating an enrollment system seamlessly integrated with descriptive analytics marks a substantial leap forward for educational institutions, especially those managing a sizable student body. This transaction processing system significantly enhances and expedites enrollment procedures while reducing the human resources needed during these enrollment periods. The advantages of this system extend to essential stakeholders in the enrollment process, including students, registrars, and administrators. With this system, students can place their trust in the precision of the information they furnish to the school, as it becomes an integral part of their official records (Marjorie et al., 2023).

The proliferation of payment methods results from several factors, including the increasing demand for efficient payment services to complement e-commerce (OECD, 2006), the transformative shifts in financial market structures driven by globalization trends (Camilleri, 2006), and the modern payment systems' tendency to harness readily available infrastructures such as the internet and mobile phones (Levitin, 2007).

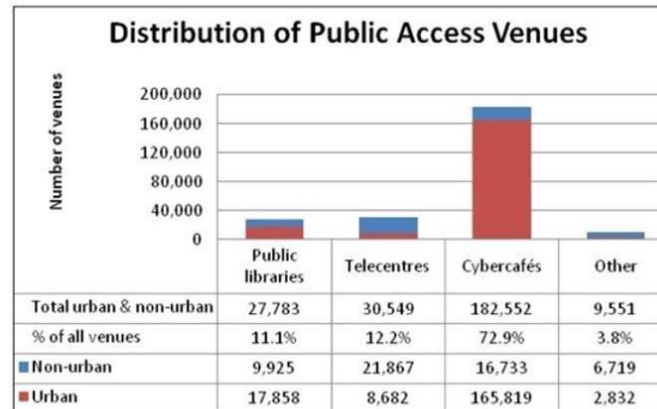
In conclusion, as emphasized in the study, integrating an enrollment system coupled with descriptive analytics signifies a progressive advancement for educational institutions such as the Filipino Tech-Voc School. This innovative transaction processing system

expedited enrollment procedures and diminished the human resource demands during these critical periods. The advantages of this technology-driven approach extend to all stakeholders involved, from students to registrars and administrators. By fostering trust in the precision and reliability of information, it became an integral part of official records, aligning with the findings of Marjorie et. al. (2023). Furthermore, the study's emphasis on technology acceptance through a mixed-method approach underscored the commitment to systematically bridging the gap between theory and practice, aiming to enhance the institution's educational environment and decision-making processes.

### **Potential Strategies for Bridging the Digital Divide: Cybercafes and Rural Connectivity**

While cybercafes are primarily oriented towards more affluent demographics, they hold untapped potential for reducing the digital divide among marginalized groups, evident from even illiterate individuals' utilization of these spaces (Haseloff, 2005). Essential strategies encompass tailored content, applications, and training initiatives, with locally relevant services like job listings and government aid as magnets for lower-income users. The success of rural Internet projects provides valuable insights for cybercafes to extend their influence and address the digital divide effectively (Williams et al., 2012; ADB, 2017).





**Fig. 2.** Distribution of Public Access Venues (ADB, 2017). The figure shows cybercafes as the venue type with the highest number of public access points at 31%, followed by government venues at 25%.

Especially in underdeveloped rural regions where infrastructure is limited, cybercafes assume a pivotal role in bridging the digital divide. A study conducted in Ghana underscores the potential of public-private partnerships, leveraging the Internet cafe model to expand Internet access. Critical factors for success include market incentives and a supportive environment that encourages investment in rural cybercafes (Williams et al., 2012). This accentuates the substantial contribution of cybercafes to fostering inclusive and sustainable ICT interventions, driving rural development (ADB, 2017).

In summary, the research at the Filipino Tech-Voc School, centered on technology acceptance among admin staff, parents, and students, echoes the broader importance of inclusivity and accessibility in education. The untapped potential of cybercafes and rural Internet projects, as highlighted in the literature, would underscore the significance of tailoring technology to meet the needs of marginalized groups. While the primary focus remained on the educational context, the study recognized the broader implications of ensuring that technology was an inclusive tool. By delving into the factors driving

technology acceptance, the study contributed to creating an environment where educational technology can benefit all stakeholders, thus aligning to reduce the digital divide and promote inclusive and sustainable ICT interventions in education and beyond.

### **Enhancing Data Management and Security in Educational Institutions**

Educational institutions derive numerous advantages from the tailored implementation of a Database Management System (Gehlot & Nigro, 2010). This technology efficiently handles fundamental tasks such as student information, class management, and score tracking but also reduces redundancy and maintains consistency across various departments (Liu et al., 2010). Furthermore, the DBMS's capacity to generate reports and analytics based on stored data empowers institutions to assess student performance, enrollment trends, attendance records, program effectiveness, and overall educational outcomes (Zhang, 2019). As data volumes grow, the DBMS's centralized and structured approach becomes increasingly pivotal for effective data retrieval, processing, and sharing, contributing to improved operational efficiency (Feng et al., 2021).

In addition to enhancing operational efficiency, a robust DBMS addresses the paramount concern of data security in educational institutions (Cao, 2021). By enforcing stringent data privacy and security policies, the DBMS ensures the proper usage of sensitive information and minimizes the risks of breaches (Helen, 2021). Through user authentication and authorization mechanisms, unauthorized access is thwarted, thereby preserving the confidentiality and integrity of institutional data (Basharat & Azam, 2012). The combined benefits of streamlined operations, informed decision-making, and fortified data security make the DBMS an indispensable tool in the effective management of educational institutions.

In relevance to the study at the Filipino Tech-Voc School, the importance of a Database Management System (DBMS) in educational institutions cannot be overstated. While the research primarily centered on technology acceptance among admin staff, parents, and students, the insights from the literature regarding the advantages of a DBMS resonate deeply with the efforts to enhance the educational environment. A well-implemented DBMS streamlines operational efficiency and strengthens data security, addressing two pivotal concerns in educational management. As the study delved into understanding technology acceptance, the study acknowledged the significance of technology infrastructure and tools like DBMS in providing a robust foundation for the digitalized student enrolment system (DSES) prototype being developed. By bridging the gap between theory and practice, the study ensured effective data management and secure technology adoption within our institution, benefiting all stakeholders, and fostering an environment of efficient and data-driven decision-making.

### **TVET in LMIC**

A study on TVET in LMICs is the 2013 review by Tripney and Hombrados. This study provides valuable insights into TVET interventions and their impact on labor market outcomes. While focusing on the overall effectiveness of TVET, the research highlights methodological shortcomings and knowledge gaps within the existing literature. The findings emphasize the need for more rigorous research to inform evidence-based decision-making in vocational education.

The study by Tripney and Hombrados is particularly relevant to this study's objective of assessing technology acceptance in a TVET setting. The study's caution regarding the limitations in evidence and the methodological issues underscores the

complexity of assessing the impact of educational interventions, including those involving technology. Policymakers and educators, particularly in LMICs, face the challenge of selecting effective strategies for vocational education. While the study by Tripney and Hombrados offers insights into TVET interventions, it also emphasizes the need for rigorous research. This theme resonates with this study's objective.

### **Benefits of TVET**

The literature on the benefits of Technical Vocational Education and Training (TVET) underscores its multifaceted advantages, contributing significantly to individual development, employability, and societal progress. Studies, including Jiin Kim's exploration of vocational education in Uganda, consistently highlight the role of TVET in human capital development. TVET equips individuals with practical skills, knowledge, and competencies, making them valuable contributors to the labor market and essential assets for national development. Notably, TVET graduates exhibit a pronounced employment effect, with higher employment rates and better wages than those with lower educational levels. Beyond economic returns, TVET plays a pivotal role in fostering inclusivity, offering pathways for marginalized groups, such as early school leavers, through non-formal vocational education.

Moreover, the emphasis on life skills education and psychological support in TVET programs contributes to personal development, reducing risky behaviors and enhancing overall life satisfaction. As the literature suggests, a change in basic assumptions is advocated globally, recognizing the need to integrate the human development approach into TVET to address economic goals and broader social and individual well-being objectives. The literature consistently demonstrates that TVET is a dynamic and impactful

educational pathway, offering a spectrum of benefits extending beyond traditional notions of skill acquisition, enriching individuals, and societies.

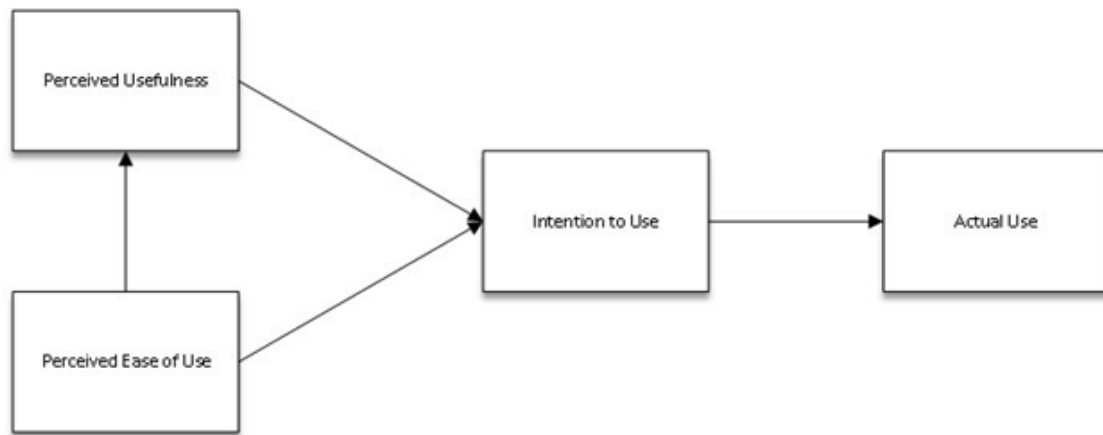
### Differences of TAM Models

**Table 1.** Comparison of TAM models

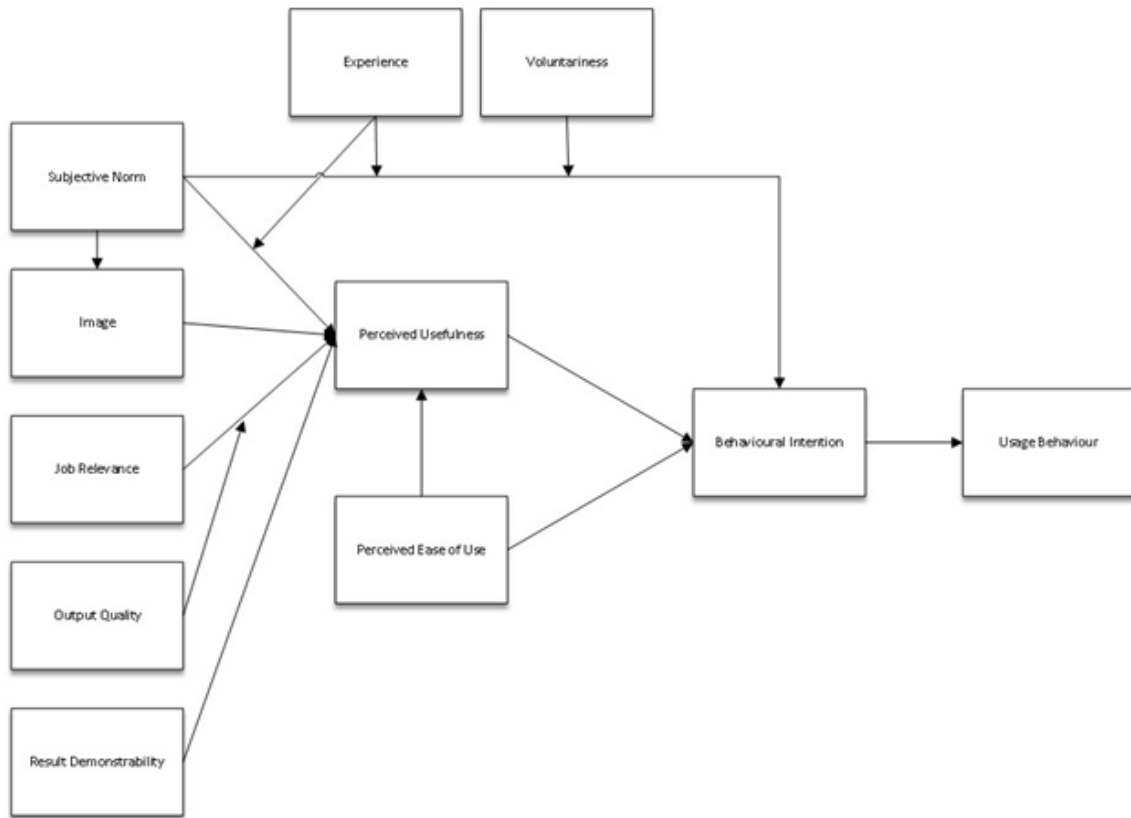
ASPECT	TAM	TAM2	TAM3
<b>Year Introduced</b>	1989	2000	2008
<b>Description</b>	The base TAM is an information systems theory that models how users accept and use a technology.	TAM2 is an extension of the base TAM. It incorporates the subjective norm, voluntariness, and image.	TAM3 is a further extension of TAM2. It incorporates the phenomenon of warm glow.
<b>Primary Constructs</b>	Perceived Usefulness (PU)	Perceived Usefulness (PU), Perceived Ease of Use (PEOU)	Perceived Usefulness (PU), Perceived Ease of Use (PEOU), Subjective Norm (SN), Cognitive Instrumental Processes (CIP)
<b>External Variables</b>	Not included	Subjective Norm (SN), Cognitive Instrumental Processes (CIP)	Subjective Norm (SN), Cognitive Instrumental Processes (CIP), Perceived Enjoyment (PE)
<b>Individual Differences</b>	Not explicitly addressed	Incorporated (e.g., demographics, personality traits)	Incorporated (e.g., demographics, personality traits)
<b>Concept of Enjoyment</b>	Not included	Not included	Perceived Enjoyment (PE)
<b>Integration of other Models</b>	Not integrated	Not integrated	Unified Theory of Acceptance and Use of Technology (UTAUT)
<b>Moderators and Mediators</b>	Not included	Not included	Included

The table above summarizes the key differences among TAM, TAM2, and TAM3 in terms of their introduction years, primary constructs, inclusion of external variables, consideration of individual differences, incorporation of the concept of enjoyment,

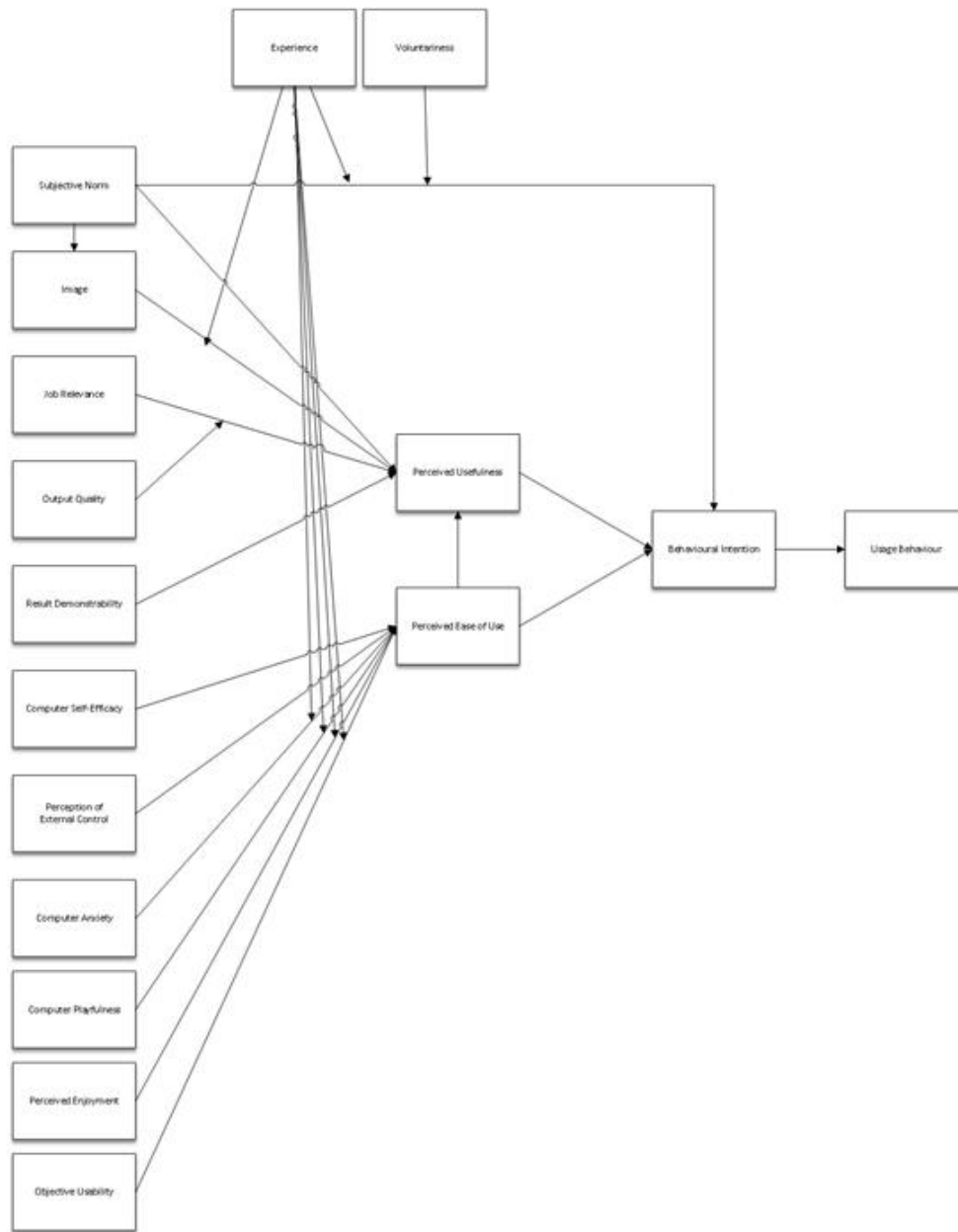
integration of other theoretical models, brief description, and inclusion of moderators and mediators.



**Fig. 3.** Technology Acceptance Model. The Technology Acceptance Model (TAM) is a cornerstone in information systems and technology adoption, serving as a widely embraced theoretical framework. Originating with Fred Davis's proposal in 1989, TAM sought to elucidate and forecast user acceptance of emerging information technologies. Central to TAM are the concepts of perceived usefulness (PU) and perceived ease of use (PEOU), positing them as principal determinants shaping individuals' attitudes towards technology employment, thereby influencing their actual usage patterns. While TAM has found extensive application and validation across diverse contexts, it exhibits limitations in elucidating certain facets of technology adoption, such as the impacts of external factors and social influences.



**Fig. 4.** Technology Acceptance Model 2. Building upon TAM's foundation, TAM2, introduced by Venkatesh and Davis in 2000, represents a significant extension to augment the model's explanatory prowess. TAM2 incorporates additional constructs and variables, most notably subjective norm (SN) and cognitive instrumental processes (CIP), to capture social influences and cognitive mechanisms beyond TAM's scope. Moreover, TAM2 underscores the significance of individual differences, encompassing factors like personality traits and demographics, in shaping technology acceptance. This integration of supplementary constructs facilitates a more holistic comprehension of the factors dictating technology adoption and usage patterns.



**Fig. 5.** Technology Acceptance Model 3 Subsequently, TAM3, proposed by Venkatesh and Bala in 2008, further refined and extended the TAM framework. In addition to incorporating elements from TAM2, TAM3 introduces the concept of perceived enjoyment (PE) as a pivotal determinant of technology acceptance, encapsulating the degree to which utilizing technology is perceived as enjoyable and gratifying. Furthermore, TAM3 integrates constructs from other theoretical models, such as the Unified Theory of Acceptance and Use of Technology (UTAUT), to furnish a more comprehensive view of technology acceptance phenomena. TAM3 also introduces moderators and mediators to account for contextual factors and interaction effects in technology adoption processes, thus enhancing the model's explanatory power and applicability.



In summary, TAM established the foundational understanding of technology acceptance. At the same time, TAM2 and TAM3 represent notable advancements incorporating additional constructs, external variables, and contextual nuances. These extensions enable a more nuanced and comprehensive understanding of user behavior, empowering researchers, and practitioners to predict better and facilitate technology adoption and usage in diverse contexts.

### **Standard Student Information Systems in BARMM and Small Muslim Communities**

Educational institutions in the BARMM grapple with challenges such as limited funding, faculty and staff competency, and inadequate facilities. A standard Student Information System (SIS) emerges as a potential solution to address these issues by offering a centralized platform to manage student-related data encompassing academic records, personal information, and financial data. By digitizing these processes, the SIS streamlines administrative tasks traditionally laden with manual steps, alleviating the burden on staff and enabling them to focus on other essential responsibilities.

The Technology Acceptance Model (TAM) posits that the acceptance of technology hinges on users' behavioral intention, which, in turn, is influenced by their perception of technology's usefulness in task performance and its perceived ease of use. Consequently, evaluating the level of user acceptance of a standard SIS within the BARMM and small Muslim communities in Mindanao necessitates the application of a modified TAM2 model.

A Database Management System (DBMS) presents several advantages over manual document browsing. It centralizes student-related data storage and organization, facilitating easy access, editing, or updating whenever necessary. By automating data

handling processes, the DBMS saves time and minimizes the likelihood of human error. Furthermore, its cloud-based architecture enables access from anywhere, anytime, enhancing flexibility and accessibility. The DBMS also ensures security and reliability by storing all student and school-related data on a cloud-based server, thus safeguarding files through role-based access control mechanisms.

In conclusion, a standard SIS holds immense importance for the residents of BARMM and small Muslim communities in Mindanao. It offers a viable solution to overcome the challenges confronting educational institutions in these regions, enhancing the efficiency and effectiveness of administrative tasks. Adopting a DBMS over manual document browsing confers numerous benefits, including enhanced data accessibility, time efficiency, and strengthened security measures. The level of user acceptance of such a system can be comprehensively evaluated by applying a modified TAM2 model.

### **Synthesis**

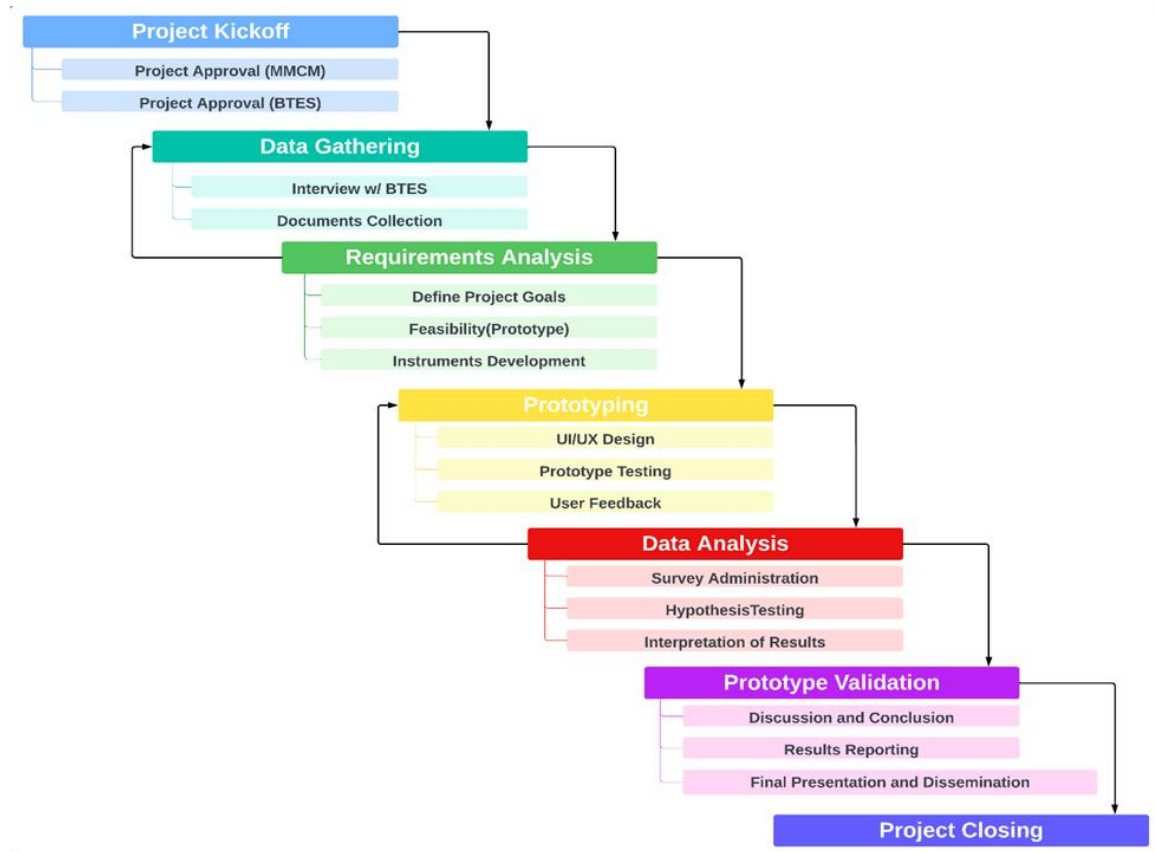
Integrating technology and innovation within educational institutions heralds a profound era of transformation. Advancements in payment solutions and electronic processing systems offer a change in basic assumptions in financial operations, promising enhanced efficiency and effectiveness. However, adopting these innovations varies among stakeholders, necessitating a nuanced understanding of user attitudes and intentions. Models such as the Technology Acceptance Model (TAM) and TAM2 are invaluable tools in navigating this landscape, bridging theory and practice effectively. The decision to utilize a modified TAM2 framework stems from its potential to enrich the overall research framework, offering a more comprehensive understanding of technology acceptance dynamics.

Moreover, integrating enrollment systems enriched with descriptive analytics emerges as a pivotal driver of progress, streamlining procedures and ensuring data accuracy. Strategies aimed at enhancing cybercafes and rural connectivity hold promise in narrowing the digital divide, emphasizing inclusivity within the educational technology realm.

Database Management Systems (DBMS) also play a critical role, promising operational efficiency and robust data security—cornerstones of effective educational management. These findings underscore technology's transformative potential in education while highlighting the importance of addressing challenges to ensure equitable, secure, and enriching educational experiences. By embracing innovation while addressing adoption challenges, educational institutions can pave the way for a more inclusive and technologically empowered future.

### 3. Methods

#### 3.1 Project Methodology



**Fig. 6.** Modified Waterfall Model with Iterative Aspects. Dr. Winston W. Royce's seminal work, "Managing the Development of Large Software Systems," presented in 1970, introduced the world to the Waterfall Model, a pioneering approach in software development methodology. The project methodology employed in this study follows a structured and iterative approach, combining elements of the modified waterfall model with feedback loops to ensure a comprehensive investigation into the acceptance of the student information system.

The methodology progressed through distinct phases, starting with a Project Kickoff to secure approvals from the course professor, adviser, department dean, program chair, and the panels, and then moving on to Data Gathering, which occurred in 2 iterations. The first iteration of the data gathering involved the interview with the BTES school head, Mrs. Flora Salendab, which was recorded and documented, along with the collection of

documents of BTES general information. The next iteration was another document collection on a department of BTES, specifically their TVET division, which included documents such as an enrolment form, grading system, progress and achievement chart, and assessment form.

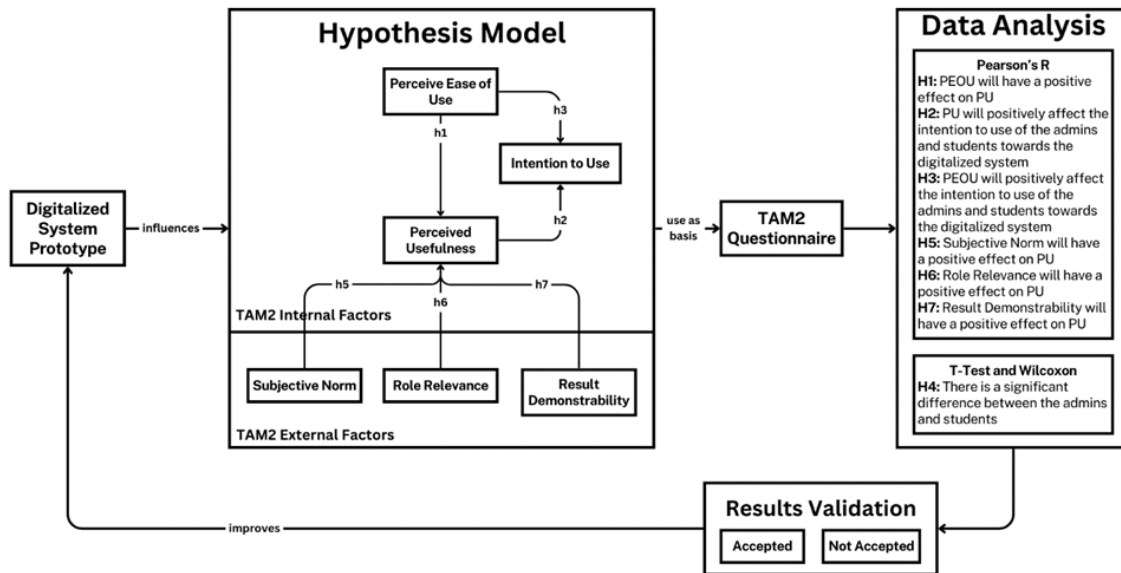
The Requirements Analysis phase defined the project objectives. It explored the instrument's feasibility and creation, including the prototype pre-development and survey questionnaire formulation. The prototype pre-development included the conception of the initial base structure, UI, and functionalities of the system design. The formulation of the survey questionnaire followed references from the TAM2-prescribed questionnaire created by Davis and Venkatesh in their study.

A pivotal aspect of this methodology was the prototyping phase, which encompassed UI/UX design, prototype testing, and user feedback collection. The researchers utilized Figma for UI development to replicate the digitalization of the current manual process involving student information. They rigorously repeated this step to emulate the proposed website system fully. The prototype testing followed, wherein the researchers conducted run-throughs to ensure no issue would be present for the on-site survey. The next step was the user feedback from family and acquaintances of the researchers and the school head of BTES. An iteration of this phase was done after the survey administration in the data analysis phase to accommodate the feedback gathered from the admins and students about the web system prototype. Comments were primarily concerned with creating a realistic feel for the prototype, recommending using information and images from their active social media page on Facebook or contacting them to retrieve the relevant documentation.

The Data Analysis phase conducted the critical steps to reach the study's conclusion, including administering the survey, quantitative testing, and interpreting the results. Survey administration involved the crucial data collection of the survey results from the participants, including the admins and BTES students. This segment included a TAM2 evaluation of their current manual enrolment process. It was followed by a TAM2 evaluation of the proposed digitalized student enrollment system in a prototype demo using Figma, developed in this study's previous phase. The researchers conducted quantitative testing in Jamovi, employing Student's t and Wilcoxon W tests for the h4 and Pearson's r for the remaining hypotheses. Subsequently, they interpreted the results through tables, diagrams, and charts using Microsoft Excel.

Finally, the Prototype Validation phase reported the results and culminated in a comprehensive presentation and dissemination of findings. The researchers drew discussion and conclusion after getting the results. These results were finalized and reported to the researcher's adviser before the final defense with the panels. The final presentation and dissemination involved the final defense of the study, followed by the dissemination of the completed study through results presentation with the beneficiary school, local public capstone presentation, and physical and digital publication of the paper.

### 3.2 Conceptual Framework



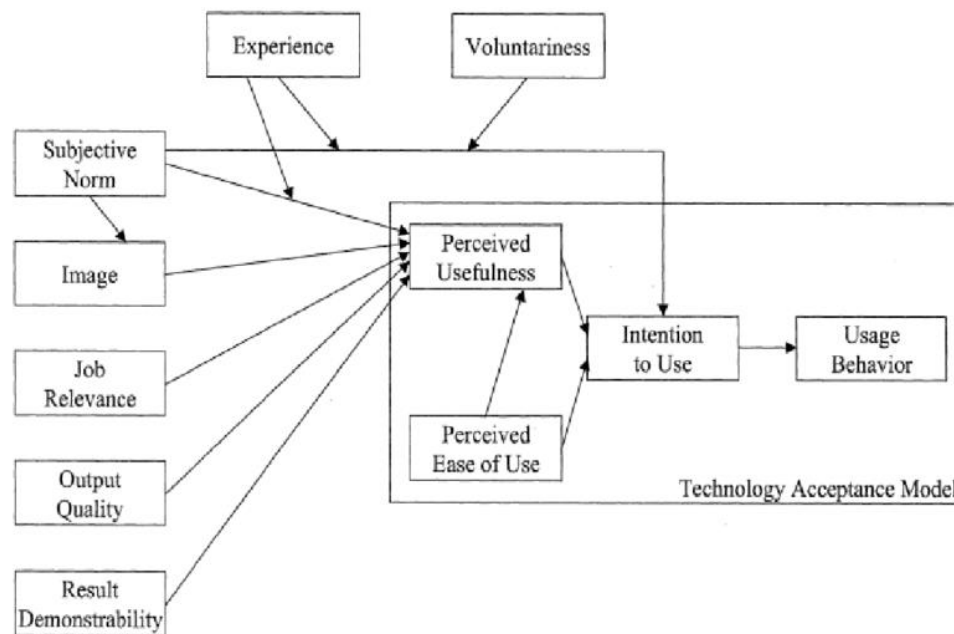
**Fig. 7.** Conceptual Framework: for Measuring Technology Acceptance. The conceptual framework integrates the Technology Acceptance Model 2 (TAM2) with crucial components of the research process to analyze the acceptance of the digitalized student information system prototype at the Filipino Tech-Voc School. TAM2, chosen for its alignment with the study's objectives, encompasses internal factors (perceived usefulness, perceived ease of use, intention) and external factors (subjective norm, role relevance, result demonstrability). It offers a systematic approach to assess stakeholders' attitudes and plans regarding system adoption.

External factors such as Subjective Norms, Role Relevance, and Result Demonstrability allowed for a deeper investigation into the social, contextual, and observable factors influencing system acceptance within the school community. Central to the study, the system prototype influenced users' perceptions and intentions regarding the technology. This influence was represented by a single arrow pointing from the system prototype to the overarching hypothesis model component, illustrating its collective impact on all TAM2 factors.

The questionnaire served as the data collection instrument, feeding into the data analysis component, where researchers utilized statistical techniques such as Pearson's  $r$

correlation and t-test to validate hypotheses. Results were categorized as "accepted" or "not accepted," indicating the acceptance of the system prototype. Overall, the conceptual framework provided a visual roadmap for understanding the relationships between the system prototype, TAM2 factors, data collection, analysis, and validation within the study.

### 3.3 Theoretical Framework



**Fig. 8.** Technology Acceptance Model 2. This study employs the Technology Acceptance Model 2 (TAM2) as the theoretical framework to explore user perceptions and intentions regarding the digitalized student information system. TAM2 provides a robust framework for comprehending technology acceptance, integrating essential constructs and external factors pertinent to this study's context.

Perceived usefulness (PU) and perceived ease of use (PEOU) constituted the core TAM2 constructs directly relevant to research questions 1 and 2. PU captures users' beliefs about the system's ability to enhance performance and achieve desired outcomes. In this study, PU assessment focused on users' perceptions of the system's efficiency, time-saving features, and effectiveness in managing student information. PEOU assessed the perceived



effort needed to learn and utilize the system, examining users' opinions on its clarity, user-friendliness, and navigational ease.

External factors, including subjective norm (SN), role relevance (RR), and result demonstrability (RD), may influence user perceptions, as emphasized in research question 4. SN reflected perceived pressure from others to use the system. At the same time, RR gauged users' perceptions of system alignment with their roles (e.g., student or administrator). RD measured the ease of communicating and demonstrating system benefits to others. Investigating these factors through TAM2 allowed for exploration of their impact on user acceptance, addressing specific objectives 4.

Moreover, TAM2 assisted in understanding potential differences in acceptance levels between administrators and students (research question 3). Analysis of PU, PEOU, and external factors for both groups enable the identification of variations in perceptions and underlying reasons in alignment with specific objective 3.

By examining these TAM2 constructs and their relationships within the Filipino Tech-Voc School context, this study comprehensively examined factors influencing user acceptance of the digitalized student information system.

### **3.4 Research Design**

This study utilized a cross-sectional survey design, a robust method to examine user perceptions and intentions regarding the digitalized student information system. Aligned with the Technology Acceptance Model 2 (TAM2) framework, this approach enabled the investigation of user attitudes and beliefs at a particular moment. The cross-sectional design facilitated efficient data collection and analysis by capturing data from a diverse sample of participants within a concise time limit.

### 3.5 Data Collection

In the data collection phase, a structured questionnaire was developed, drawing upon the conceptual framework provided by the Technology Acceptance Model 2 (TAM2). The questionnaire comprehensively captured participants' attitudes and perceptions toward the digitalized student information system, ensuring alignment with the study's objectives.

The questionnaire employed a 5-point Likert scale to facilitate accurate responses, giving participants a nuanced spectrum of options for expressing their opinions. From "Strongly Disagree" to "Strongly Agree," this scale allowed participants to convey the strength of their agreement or disagreement with each statement. Likert scale with the following response options: 1 - Strongly Disagree, 2 - Disagree , 3 - Neither Agree nor Disagree, 4 – Agree, 5 - Strongly Agree

In addition to TAM2-related inquiries, the questionnaire included demographic items to gather basic information about participants, such as age and gender. Personal identifiers like names were deliberately excluded from the questionnaire to safeguard confidentiality.

The questionnaire comprised two distinct types, each tailored to assess specific aspects of user perceptions: Perceived Usefulness (PU) (6 items), Perceived Ease of Use (PEOU) (6 items), Intention to Use (IU) (2 items), Subjective Norm (SN) (2 items), Role Relevance (RR) (2 items), Result Demonstrability (RD) (4 items).

Type 1: This section evaluated participants' perceptions of the current enrolment process. It included questions about perceived usefulness (PU), perceived ease of use (PEOU), and external factors (subjective norm, role relevance, and result demonstrability).

Each construct was measured using carefully selected items to assess user perceptions comprehensively.

Type 2: This segment aimed to gauge participants' perceptions of the proposed student information system prototype. Like Type 1, it utilized scales aligned with TAM2 constructs to assess PU, PEOU, and external factors. Before participants completed this section, researchers briefed them about the prototype through a video demonstration.

Upon obtaining informed consent, participants sequentially completed the questionnaire for the current enrolment process. Researchers then presented participants with a video demonstration displaying the proposed system prototype. Finally, participants completed the questionnaire assessing their perceptions of the proposed system, allowing for a comparative analysis of user perceptions between the current enrolment process and the proposed system prototype.

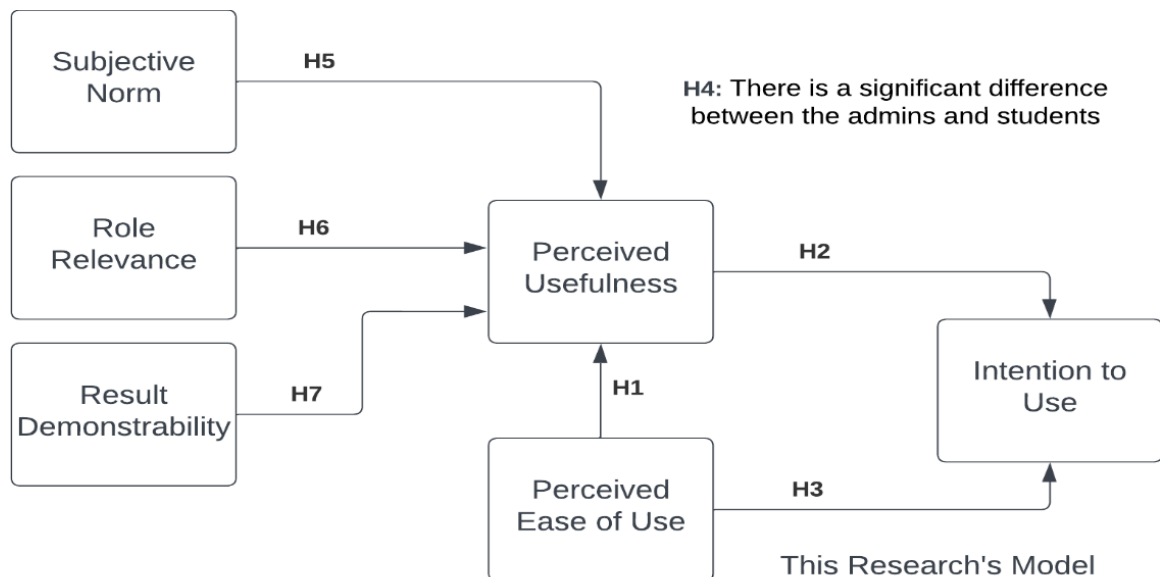
### **3.6 Sampling**

In employing a stratified convenience sampling technique, the study ensured a balanced representation of administrative staff and students within the Filipino Tech-Voc School community. Stratification involves dividing the population into distinct groups based on specific characteristics—in this case, administrative staff, and students. By stratifying the sample, the study ensured that each subgroup was adequately represented in the participant pool, allowing for insights from both perspectives.

Convenience sampling, on the other hand, entails selecting participants based on their accessibility and availability, making it a pragmatic choice for recruiting participants within the school environment. This method facilitated efficient participant recruitment, considering the time and resource constraints of the study.

While the combination of stratification and convenience sampling offered practical benefits in terms of feasibility and cost-effectiveness, it was essential to recognize its limitations. One notable limitation was the potential lack of representativeness of the sample compared to the entire school population. Because participants were selected based on convenience and may not fully reflect the diversity of the school community, the findings may need to be generalizable to all members of the school population. Therefore, interpreting the results should be done with caution, and future studies may benefit from employing more rigorous sampling techniques to enhance the external validity of the findings.

### 3.7 Data Analysis



**Fig. 9.** Hypotheses Model. The proposed model investigates the factors influencing user acceptance of a digitalized student information system in a BARMM Tech-Voc school setting. It draws upon the modified TAM2 model, incorporating two external factors from TAM2 and adding Role Relevance to explore the factors affecting users' acceptance and adoption.

**Key constructs:**

**Perceived Ease of Use (PEOU):** The degree to which users believe the system is effortless to learn and operate.

**Perceived Usefulness (PU):** The extent to which users perceive the system as beneficial and enhancing their work performance.

**Attitude towards Using (AT):** Users' feelings and predisposition towards using the system regularly.

**Intention to Use (IU):** Users' likelihood of employing the system in the future.

**Subjective Norm (SN):** The perceived social pressure from significant others to use or not use the system.

**Role Relevance (RR):** The degree to which users believe the system aligns with their roles and responsibilities.

**Hypotheses:**

**H1:** Perceived ease of use (PEOU) positively affects perceived usefulness (PU).

**H2:** PU positively affects intention to use the digitalized system.

**H3:** PEOU positively affects intention to use the system.

**H4:** Admins and students differ in their perceptions.

**H5-H7:** External factors (Subjective Norm, Role Relevance, Result Demonstrability) positively affect PU.

**Descriptive statistics:** are a fundamental tool for summarizing and understanding the collected data. These statistics provide a comprehensive overview of critical characteristics, focusing on central tendencies such as means, which offer insight into the average participant response across different questionnaire items. Standard deviations

complement this by indicating the extent of variability or dispersion around the mean, providing valuable information about the sample's consistency, or spread of responses.

Furthermore, frequencies were employed to examine the distribution of responses for each questionnaire item. It allowed for a detailed exploration of how participants' opinions were distributed across the response categories, providing insights into the prevalence of certain attitudes or perceptions within the sample. Together, these descriptive measures facilitated a clear and concise presentation of the data, enabling a thorough interpretation of participants' perceptions and intentions toward the digitalized student information system.

**Comparative Analysis:** The study employed paired-sample t-tests to compare participants' perceptions of the current enrolment process with those of the proposed prototype. This statistical method determined whether there were significant differences in how participants perceive the two. However, in cases where the assumption of data normality was not met, alternative non-parametric tests such as the Wilcoxon signed-rank and Mann-Whitney U tests were considered. These non-parametric tests were robust and can handle skewed data distributions. Moreover, they offered valuable insights into potential differences in perceptions between administrative staff and students, thereby enriching the understanding of how different stakeholder groups perceive the proposed system.

**Correlation Analysis:** Pearson's correlation coefficient, a widely used statistical measure, was employed to examine the relationships between external factors (subjective norm, role relevance, and result demonstrability) and the perceived usefulness of the proposed system. This analysis allowed for a nuanced understanding of the strength and

direction of these relationships, shedding light on the extent to which factors such as social influence, alignment with user roles, and the clarity of system benefits impact users' acceptance of the technology. By quantifying these relationships, the study uncovered critical determinants driving technology acceptance within the school community, informing targeted strategies for system implementation and user support.

### 3.8 Feasibility Study

**Table 2.** Feasibility Assessment Table for Prototype Testing and Survey

Aspect	Assessment	Result
<b>Operational Feasibility</b>	High	The school has admin personnel to help set up and manage the mock enrollment process. Stakeholders, including students, instructors, and admins, have demonstrated digital literacy. The operational aspect is favorable for the prototype testing.
<b>Technical Feasibility</b>	High	The school has the necessary hardware and software to support mock enrollment and prototype testing. The technical infrastructure is adequate for simulating the enrollment process.
<b>Economic Feasibility</b>	High	The budget allocated for the prototype testing is sufficient to cover any potential costs related to hardware or software components required for the testing. No significant economic constraints are affecting the feasibility of the testing.

In this assessment, each aspect of feasibility was marked as "High," indicating that the school was well-prepared and capable of conducting the mock enrollment and prototype testing. The availability of Admin personnel, digital literacy among stakeholders, adequate technical resources, and a sufficient budget contribute to a positive feasibility

assessment. These high feasibility ratings suggested the school was ready and well-equipped to conduct prototype testing to demonstrate the digitalized enrollment process. Once the testing was completed, the researchers updated the assessment with any actual findings or adjustments that may arise during the testing phase.

**Operational Feasibility:** Operational feasibility assessed the readiness of the Filipino Tech-Voc School to conduct the mock enrollment and prototype testing smoothly. It considered factors such as Admin personnel's availability and students' digital literateness.

- Admin Personnel: Adequate admin personnel were available to set up and manage the mock enrollment and testing.
- Digital Literacy: Stakeholders, including students, instructors, and admins, demonstrated a proficient level of digital literacy necessary to engage in the testing.

**Technical Feasibility:** Technical feasibility assessed the school's infrastructure and resources required for simulating the enrollment process during the prototype testing.

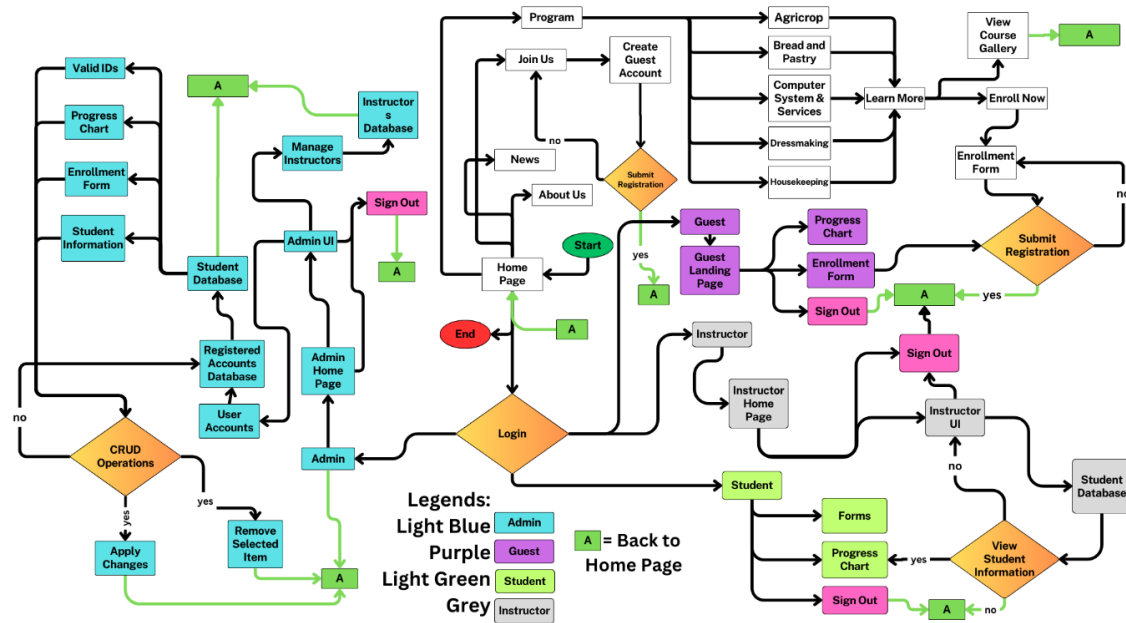
- Hardware and Software: The school had the necessary hardware and software to support the mock enrolment and prototype testing.
- Infrastructure Compatibility: The school's existing technical infrastructure was compatible with the requirements for simulating the enrollment process during testing.

**Economic Feasibility:** Economic feasibility evaluated the budgetary aspects of the prototype testing, ensuring that there were sufficient financial resources to cover costs related to hardware, software, and any unexpected expenses.



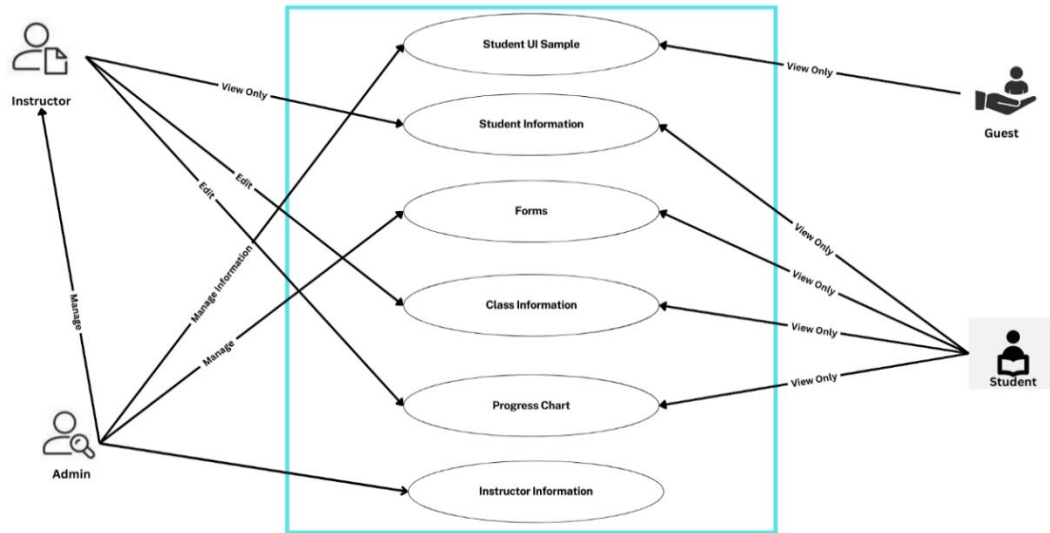
- Budget Sufficiency: The allocated budget for the prototype testing was sufficient to cover all anticipated costs, including hardware or software components and personnel expenses.

### 3.9 System Design and Analysis



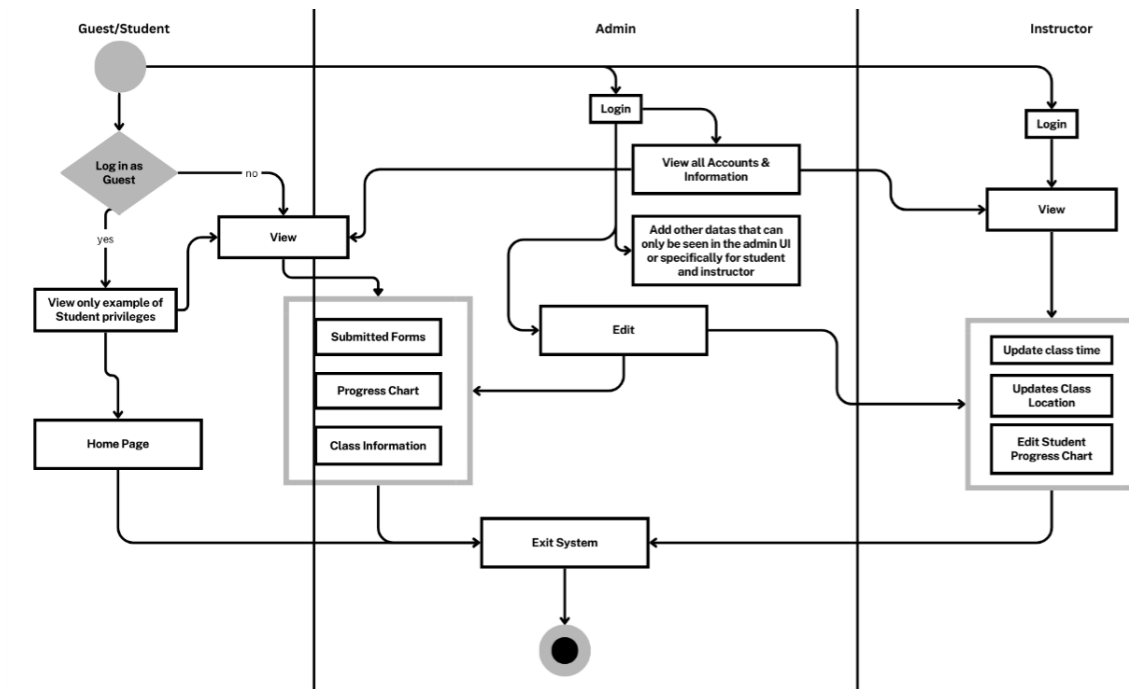
**Fig. 10.** System Design. Figure 6 presents the system's flowchart, illustrating its operation starting from the 'Home Page.' Since the system is primarily intended for monitoring purposes and does not require extra functions beyond those for administrators and instructors, users can stop the web application anytime.

The flowchart delineated the system's pathways and outlined the specific actions available to each user role. Administrators possess comprehensive control and can edit all system information and customize user settings. In contrast, instructors can access the student database for information and tailor progress charts. Students and Guests were limited to viewing privileges only.



**Fig. 11.** Use Case Diagram. The preceding diagram displays the use case of the program, illustrating the functional interactions among its target users: the Admin, Instructor, Students, and Guest. Note that the Guest role is primarily for exploration purposes, providing limited access to sample UI features. The diagram delineates three main functionalities: Edit, View Only, and Manage, each tailored to specific user roles.

Furthermore, it is worth highlighting that the Admin held a pivotal role with the ability to customize every user's experience. The arrow connecting the Admin to the Instructor represented the Admin's authority to modify the Instructor's actions. Conversely, Students and Guests were limited to view-only options, emphasizing the system's hierarchical structure of user privileges.



**Fig. 12.** Activity Diagram. Figure 8 portrays the activity diagram of the proposed prototype. The prototype starts with the log in of the user, in this case, it can be a guest, student, admin, or instructor. A guest can view a sample of what a student can view. Students can view their submitted forms, progress chart, and class information. An admin can modify the information of students and instructors and add data only accessible for the admin, such as announcement and news information. Lastly, the instructor can view their information, and edit class information and their students' progress chart.

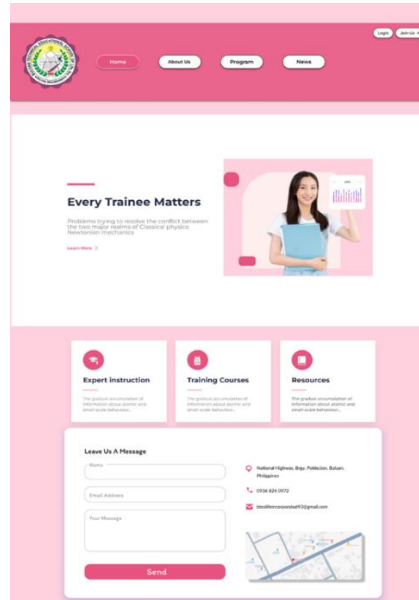
### 3.10 Materials and Models

The utilization of the website prototype within Figma was instrumental in the optimization of the development process. Figma is a crucial tool for creating a dynamic and interactive representation of the website before surveying. This platform facilitated the visualization of the user interface and overall design and enhances collaboration with team members and stakeholders. The real-time collaboration features embedded in Figma enabled seamless communication, fostering prompt feedback and iterative adjustments. Additionally, the prototyping functionality in Figma allowed for the simulation of user interactions, affording a comprehensive preview of the website's anticipated functionality. As the design iteration progresses, Figma's prototyping capabilities enabled the refinement of user flows,

ensuring a user-friendly experience. In summary, integrating Figma into the website development process significantly contributed to heightened efficiency and the realization of a polished final product.

### 3.11 User Interface

#### Default Pages:



**Fig. 13.** Home Page. The homepage is the initial landing page upon accessing the website, akin to standard home pages. The researchers aimed to incorporate promotional content during the planning phase, including advertisements, expert instruction, and training course highlights. Additionally, the homepage features a "leave a message" section, enabling guest inquiries, alongside essential school information such as location, email, contact number, and geographical landmarks displayed on a map at the interface's bottom.



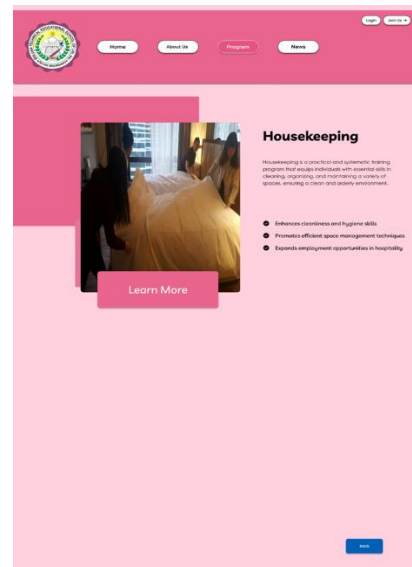
**Fig. 14.** About Us. The "About Us" section prominently features vital individuals overseeing the tech-voc programs. Specifically, this includes the school head, who is also a significant contributor to the research, and the two current technical officers overseeing existing programs. Furthermore, this section presents the school's vision and mission statements in the lower portion.



**Fig. 15.** List of Programs 1. The "Programs" button provides access to the school's current offerings. Users can explore brief descriptions of each program within this interface, highlighting the skills they can develop upon enrollment. A "Learn More" button accompanies each program, facilitating access to further details.



**Fig. 16.** List of Programs 2. The "Programs" button provides access to the school's current offerings. Users can explore brief descriptions of each program within this interface, highlighting the skills they can develop upon enrollment. A "Learn More" button accompanies each program, facilitating access to further details.



**Fig. 17.** List of Programs 3. The "Programs" button provides access to the school's current offerings. Users can explore brief descriptions of each program within this interface, highlighting the skills they can develop upon enrollment. A "Learn More" button accompanies each program, facilitating access to further details.



**Fig. 18.** Learn More. Clicking the "Learn More" button directs users to individual program pages that provide comprehensive information, including program details, promotional content, skill enhancement opportunities, and a button to access the program's course gallery.

**Fig. 19.** Enrollment Form page 1. When users click the "Enroll Now" button, they would be prompted to complete the enrollment document. This document is a digital copy stored in the system's database for record-keeping purposes.

**Learner/Trainee/Students/Clients Classification:**

<input type="checkbox"/> 4PS Beneficiary	<input type="checkbox"/> Returning/Repatriated Overseas Filipino Workers (OFW)
<input type="checkbox"/> Displaced Workers	<input type="checkbox"/> TVET Trainers
<input type="checkbox"/> Family Members of AFP and PNP	<input type="checkbox"/> Wounded In-Action AFP & PNP Personnel
<input type="checkbox"/> Wounded In-Action	<input type="checkbox"/> Balik Probinsya
<input type="checkbox"/> Industry Workers	<input type="checkbox"/> Family Members of AFP and PNP Killed In-Action
<input type="checkbox"/> Out-of-School Youth	<input type="checkbox"/> Indigenous People & Cultural Communities
<input type="checkbox"/> Rebel Returnees/Decommissioned	<input type="checkbox"/> MILF Beneficiary
<input type="checkbox"/> Combatants	<input type="checkbox"/> RCEF-RESP
<input type="checkbox"/> TESDA Alumni	<input type="checkbox"/> Student
<input type="checkbox"/> Agrarian Reform Beneficiary	<input type="checkbox"/> Uniformed Personnel
<input type="checkbox"/> Drug Dependent Surrenderers/Surrenders	<input type="checkbox"/> Victim of Natural Disasters and Calamities
<input type="checkbox"/> Farmers and Fishermen	<input type="checkbox"/> Others: _____ (Please Specify)
<input type="checkbox"/> Inmates and Detainees	
<input type="checkbox"/> Overseas Filipino Workers (OFW) Dependents	

**Type of Disability (for Person with Disability Only): To be filled up by the TESDA Personnel**

<input type="checkbox"/> Mental/Intellectual	<input type="checkbox"/> Disability Due to Chronic Illness
<input type="checkbox"/> Hearing Disability	<input type="checkbox"/> Orthopedic (Musculoskeletal) Disability
<input type="checkbox"/> Psychosocial Disability	<input type="checkbox"/> Multiple Disabilities, specify
<input type="checkbox"/> Visual Disability	<input type="checkbox"/> Learning Disability
<input type="checkbox"/> Speech Impairment	

Back Next

**Fig. 20.** Enrollment Form page 2. When users click the "Enroll Now" button, they would be prompted to complete the enrollment document. This document is a digital copy stored in the system's database for record-keeping purposes.

**Causes of Disability (for Person with Disability Only): To be filled up by TESDA personnel**

☐ Congenital/Inborn ☐ Illness ☐ Injury

**Name of Courses/Qualification**

**If Scholar, What Type of Scholarship Package (TWSP, PESFA, STEP, others)?**

**Privacy Disclaimer**

I hereby allow TESDA to use/post my contact details, name, email, cellphone/landline nos. and other information I provided which may be used for processing of my scholarship application, for employment application and for the survey of TESDA programs.

☐ Agree ☐ Disagree

**Applicant's Signature**

This is to certify that the information stated above is true and correct

APPLICANT'S SIGNATURE OVER PRINTED NAME DATE ACCOMPLISHED

Noted By: REGISTRAR/SCHOOL ADMINISTRATOR (SIGNATURE OVER PRINTED NAME) DATE RECEIVED

RIGHT THUMBMARK

Back Apply

**Fig. 21.** Enrollment Form page 3. When users click the "Enroll Now" button, they would be prompted to complete the enrollment document. This document is a digital copy stored in the system's database for record-keeping purposes.



Causes of Disability (for Person with Disability Only): To be filled up by TESDA personnel

☐ Congenital/Inborn ☐ Illness ☐ Injury

Name of Courses/Qualification

If Scholar, What Type of Scholarship Package (TWSP, PESFA, STEP, others)?

Privacy Disclaimer

I hereby allow TESDA to use/post my contact details, name, email, cellphone/landline nos, and other information for scholarship application purposes.

Applicant's Signature

Enrollment Form Submitted!

Thank you for choosing Bulacan Technical Educational School of Life!

Please wait for an email confirmation of your enrollment.

Cancel Done

APPLICANT'S SIGNATURE OVER PRINTED NAME

DATE ACCOMPLISHED

Noted By:

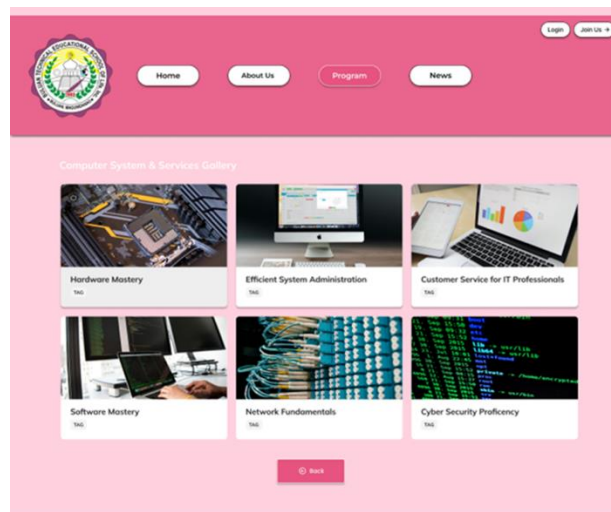
REGISTRAR/SCHOOL ADMINISTRATOR (SIGNATURE OVER PRINTED NAME)

DATE RECEIVED

RIGHT THUMBPRINT

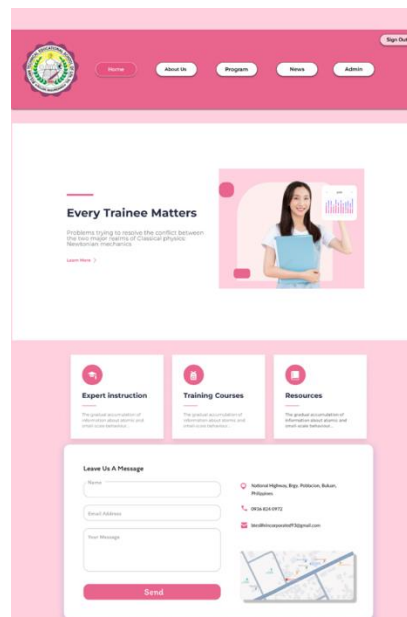
Back Apply

**Fig. 22.** Enrollment Form page 4. When users click the "Enroll Now" button, they would be prompted to complete the enrollment document. This document is a digital copy stored in the system's database for record-keeping purposes.



**Fig. 23.** View Course Gallery. The program's course gallery displays past students' activities through a small gallery format accompanied by tags. This feature aims to engage users and enhance the program's overall appeal.

## Use Case 1: Admin



**Fig. 25.** Admin Home Page. Upon logging in, administrators are directed to the standard Home Page, which has an extra button allowing them to access their interface.

Administrators have comprehensive control over all aspects of the website, including the ability to add, edit, and delete content and information stored within the database.



**Fig. 26.** Admin Landing Page. Upon accessing the administrator interface, the admin encounters a cluster of data. While the prototype is still under development, the primary focus is actively managing student and instructor information within the database. The researchers can manage other functionalities as modules for potential future enhancements. Essential functional components comprise the "User Accounts" list and the "Manage Instructors" section. Furthermore, researchers intend to integrate an analytical tool for visualizing database metrics, with a placeholder for this feature situated at the lower part of the screen. Moreover, administrators can back up and restore the database, ensuring data integrity and security.

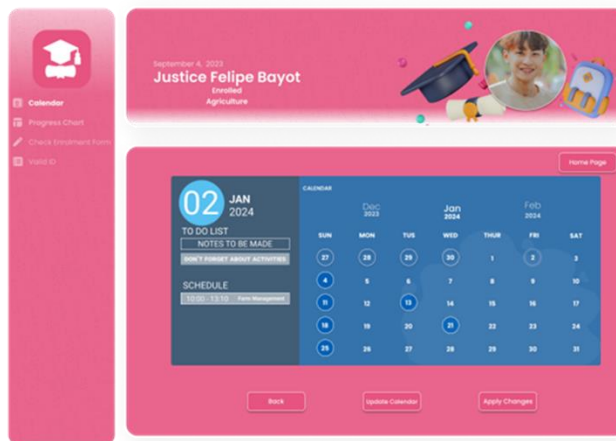
The Admin Student Database table displays a list of enrolled students with the following columns: STUDENT, Age, Sex, Address, Program, Status, and Type of Valid ID. The data is as follows:

STUDENT	Age	Sex	Address	Program	Status	Type of Valid ID
Justice Felipe Real Royce (2000-10-10)	27	Male	Deoria City	Agriculture	Enrolled	Driver's License
Peter Santa Alvarado Santos (2000-10-10)	23	Male	Deoria City	CIS	Enrolled	Birth Certificate
Kathleen Quilho Camacho (2000-10-10)	18	Female	Deoria City	Bread and Pastry	To be followed	Driver's License
Josko Hagimchay Carlos (2000-10-10)	32	Female	Deoria City	Dreammaking	Enrolled	National ID
Elizabeth Yag (2000-10-10)	44	Female	Deoria City	Housekeeping	To be followed	Birth Certificate
Markus Adewumi (2000-10-10)	21	Male	Deoria City	Dreammaking	To be followed	National ID
Maria Mar Yag (2000-10-10)	47	Female	Deoria City	Dreammaking	Enrolled	Driver's License

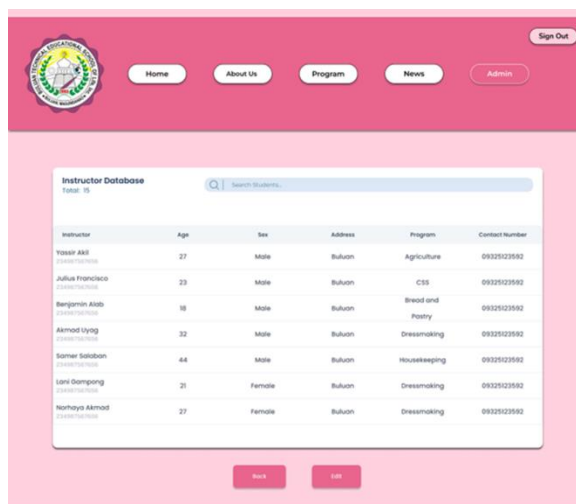
At the bottom of the table are two buttons: "Add" and "Edit".

**Fig. 27.** Admin Student Database. The "Student Accounts" section grants administrators access to the student database, containing records of all enrolled students and pertinent

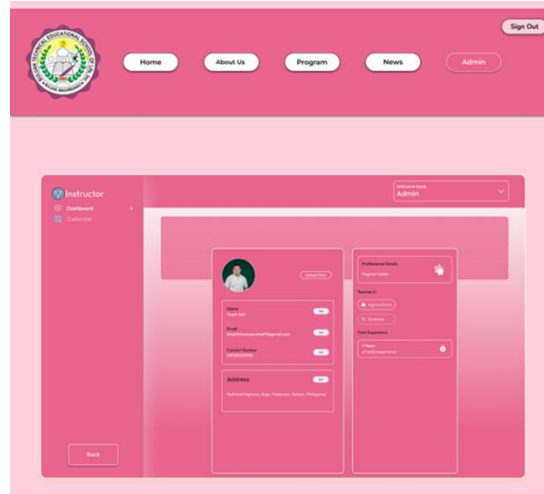
personal details such as age, gender, enrolled program, status, and submitted forms or identification.



**Fig. 28.** Admin Student UI (User Interface). When the administrator selects a specific student from the database, the system will redirect them to the individual student's information page. Here, administrators possess the authority to add, edit, or delete information displayed on the student's user interface and for instructors.

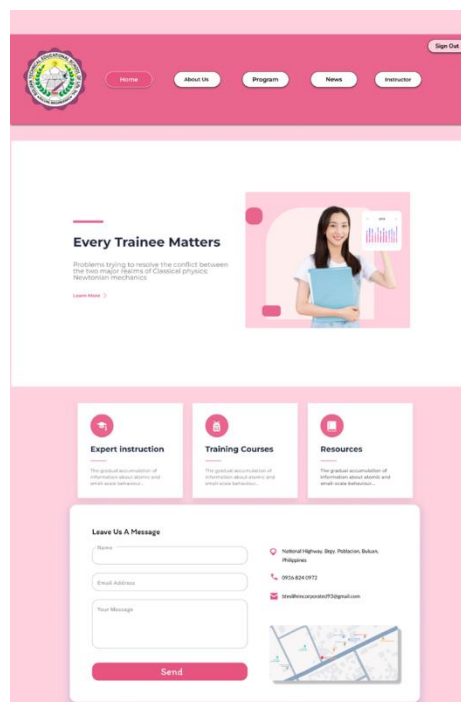


**Fig. 29.** Admin Instructor Database. In the "Manage Instructors" section, administrators can access the instructor database, presenting a tabulated view of instructors' details, including name, age, gender, address, assigned program, and contact information. Administrators can modify instructor records, including adding or removing instructors from the database.



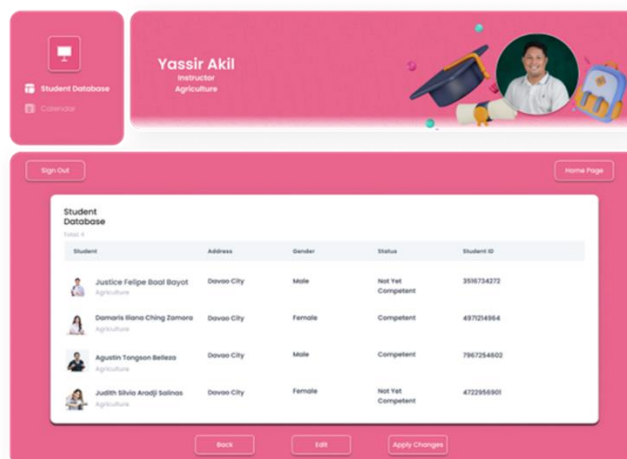
**Fig. 30.** Admin Instructor UI. Like the student management section, administrators can oversee instructor information, including professional details, current teaching assignments, and teaching experience.

### Use Case 2: Instructor



**Fig. 31.** Instructor Home Page. When logging in as an instructor, they are directed to the default Home Page, which includes an additional button providing access to the instructor's user interface. The instructor button, prominently displayed on the Home Page, is a gateway to the instructor landing page. This dedicated space provides instructors with

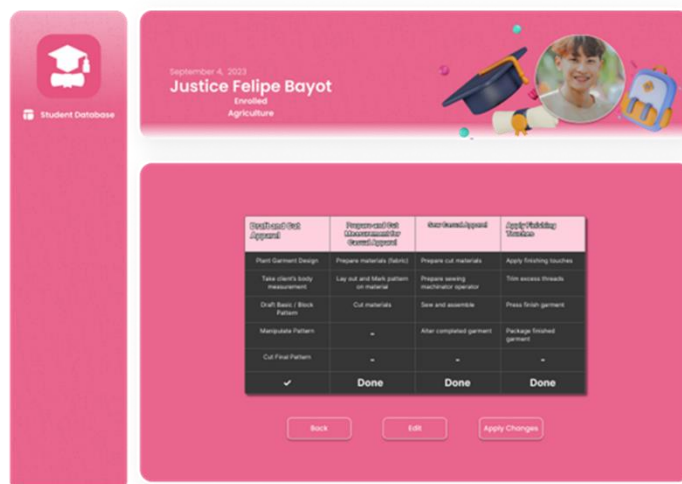
comprehensive tools for managing their student database, including access to student profiles, progress charts, and program assignments.



**Fig. 32.** Instructor Landing Page. Upon accessing the instructor landing page, instructors are presented with a comprehensive overview of their student roster, accompanied by relevant information such as student photographs and assigned programs. Instructors can edit student information directly within this interface, including progress charts and status updates. The instructor interface facilitates efficient student management, allowing instructors to navigate and modify individual student profiles, as necessary. By clicking on a specific student, instructors can access detailed student information and make pertinent changes to progress charts and other relevant data.

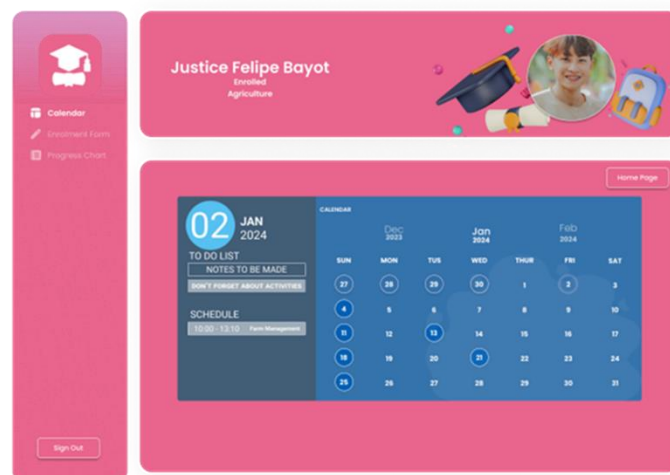


**Fig. 33.** Instructor Calendar. If the instructor wishes to edit the calendar, they can navigate to the dashboard and select the calendar option. This action will transition them to the calendar user interface, where they can input specific dates and corresponding headers. Any edits the instructor makes will also automatically reflect on the students' calendars.

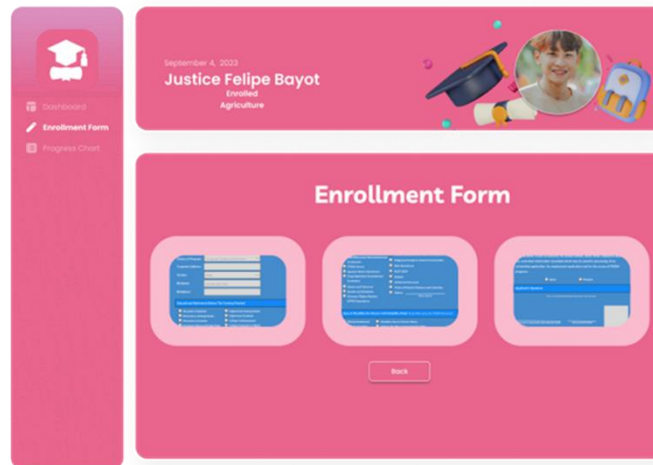


**Fig. 34.** Instructor Progress Chart. The instructors' modifications are immediately reflected in the student's records, ensuring real-time updates and accuracy in student progress tracking. This streamlined interface empowers instructors with the tools to monitor student progress, make informed decisions, and provide targeted support to facilitate student success within their programs.

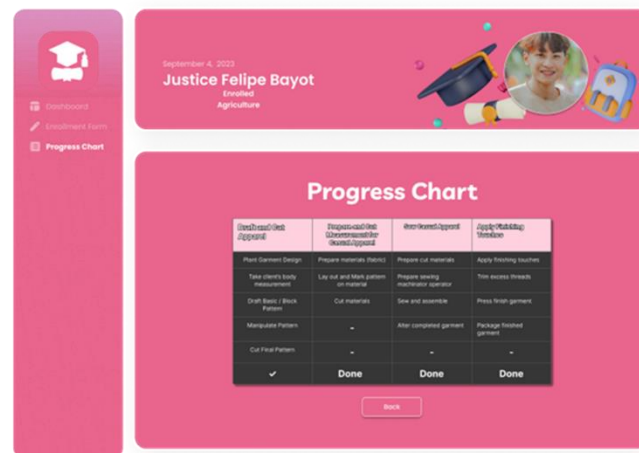
### Use Case 3: Student



**Fig. 35.** Student Landing Page. Upon logging in as a student, the user is directed to a designated user interface customized for approved accounts, as determined by the administrator. The landing page features a calendar, which facilitates the scheduling of events and provides instructor notifications regarding class schedules, topics, and timings. Additionally, the landing page prominently displays the current date, the student's name, student status, their photograph, and the program in which they are enrolled. To sign out, students must access the Dashboard and press the sign-out button, which appears after that.



**Fig. 36.** Student Enrollment Form. The student dashboard on the left side of the interface provides access to critical features, including the Dashboard itself, the Enrollment Form, and the Progress Chart. Clicking on the "Enrollment Form" option allows students to access their personal enrollment details.



**Fig. 37.** Student Progress Chart. The Progress Chart is a pivotal tool for monitoring the student's performance and tracking the tasks required to complete their respective Tech-Voc program. This chart delineates specific task instructions and associated rubrics for achievement, enabling instructors to assess student progress. It is a comprehensive checklist delineating the student's progress within their respective program.



## Use Case 4: Guest

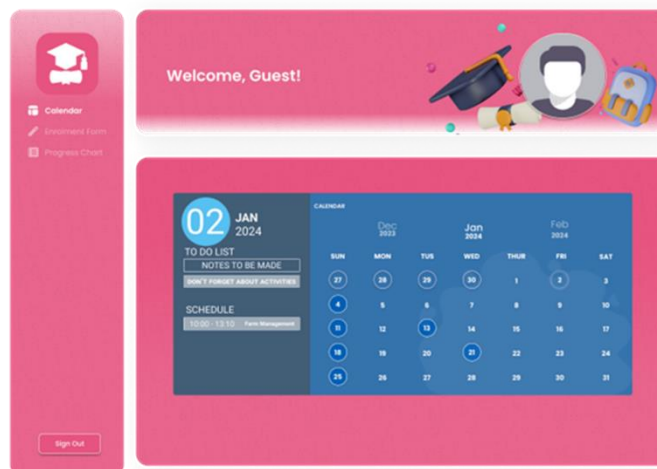
The registration form is titled "TESDA ABOT LAHAT!" and features the logos of TESDA and the Technical Educational School of Iloilo. On the left, a list of benefits includes Skills Development Access, Job Opportunities, Vocational Training, Lifelong Learning, and Technical Expertise, each with a checkmark. The form fields on the right include First Name, Middle Name, Last Name, Username, Password, Email Address, Confirm Email, City, Province, and Address. A "Create Account" button is at the bottom, with a "Back" button below it.

**Fig. 38.** Registration Form. Users are automatically assigned guest privileges upon registering an account on the website. However, to access student functionalities, guest accounts require approval from the administrator. Upon completion of the registration process, users await approval from the administrator. During this period, the platform limits user access for those with guest accounts, directing them to a guest landing page upon logging in.

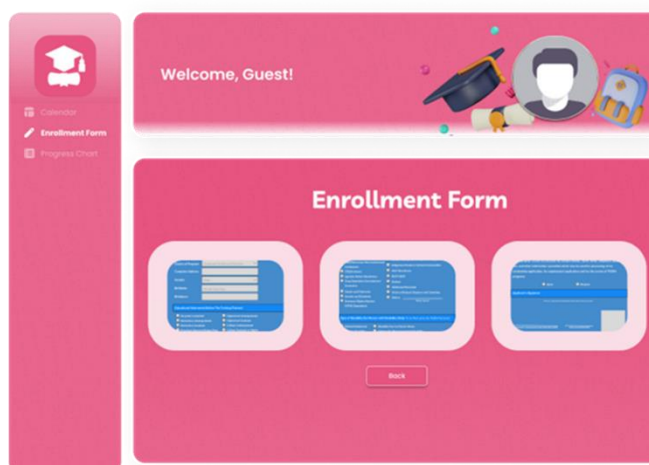
A success message overlay is displayed in the center of the registration form. It features a yellow envelope icon with a document inside. The text reads: "Greetings! You have successfully created an account! You will now be able to login as guest." Below the message is an "OK" button. The background shows the registration form fields and buttons, which are partially obscured by the overlay.

**Fig. 39.** Registration Success. Users are automatically assigned guest privileges upon registering an account on the website. However, to access student functionalities, guest

accounts require approval from the administrator. Upon completion of the registration process, users await approval from the administrator. During this period, the platform limits user access for those with guest accounts, directing them to a guest landing page upon logging in.

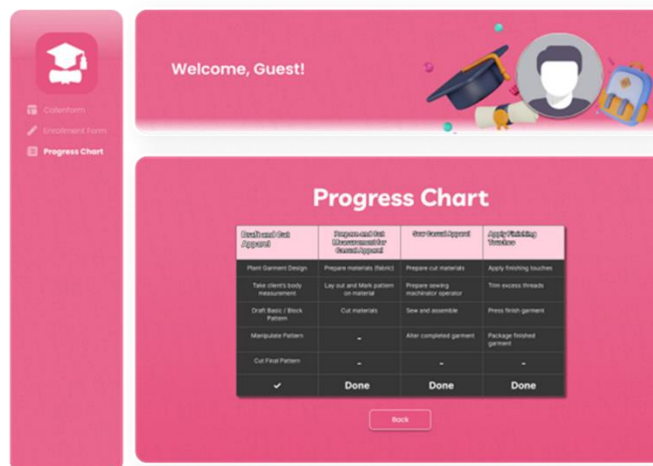


**Fig. 40.** Guest Landing Page. The landing page previews the student user interface, acting as a placeholder until users receive full student privileges. During this interim period, users can acquaint themselves with the platform's interface while awaiting approval from the administrator. Upon approval, guest accounts are upgraded to student status, granting access to the complete range of student features and functionalities. The transition from guest to student privileges depends on administrator approval, ensuring only authorized users can access sensitive student-related information and functionalities.



**Fig. 41.** Guest Enrollment Form. The landing page previews the student user interface, acting as a placeholder until users receive full student privileges. During this interim period,

users can acquaint themselves with the platform's interface while awaiting approval from the administrator. Upon approval, guest accounts are upgraded to student status, granting access to the complete range of student features and functionalities. The transition from guest to student privileges depends on administrator approval, ensuring only authorized users can access sensitive student-related information and functionalities.



**Fig. 42.** Guest Progress Chart. The landing page previews the student user interface, acting as a placeholder until users receive full student privileges. During this interim period, users can acquaint themselves with the platform's interface while awaiting approval from the administrator. Upon approval, guest accounts are upgraded to student status, granting access to the complete range of student features and functionalities. The transition from guest to student privileges depends on administrator approval, ensuring only authorized users can access sensitive student-related information and functionalities.

#### 4. Results and Discussion

In this section, the researchers present the results obtained from the study, covering various aspects such as Demographics, a Comparison between the current manual process and the proposed prototype, Hypothesis Testing outcomes, and Descriptive Results. The Demographics analysis provided an overview of participant data, including gender and age, categorized into administrative staff and students. The Comparative Analysis juxtaposed the current manual process with the proposed prototype, offering insights into participants' perceptions of the system's potential benefits. Hypothesis Testing examined the influence of Perceived Usefulness (PU) and Perceived Ease of Use (PEOU) on participants' intention

to use the proposed prototype, aligning with the study's third and fourth objectives. Utilizing statistical tests such as T-test and Mann-Whitney U, this section explored differences between administrative staff and students and assessed the impact of external factors on PU. Additionally, Descriptive Results provided detailed statistics derived from the survey data, addressing the study's first and second objectives by presenting participants' perspectives on perceived usefulness, perceived ease of use, and intention to use.

#### **4.1 Result Feasibility**

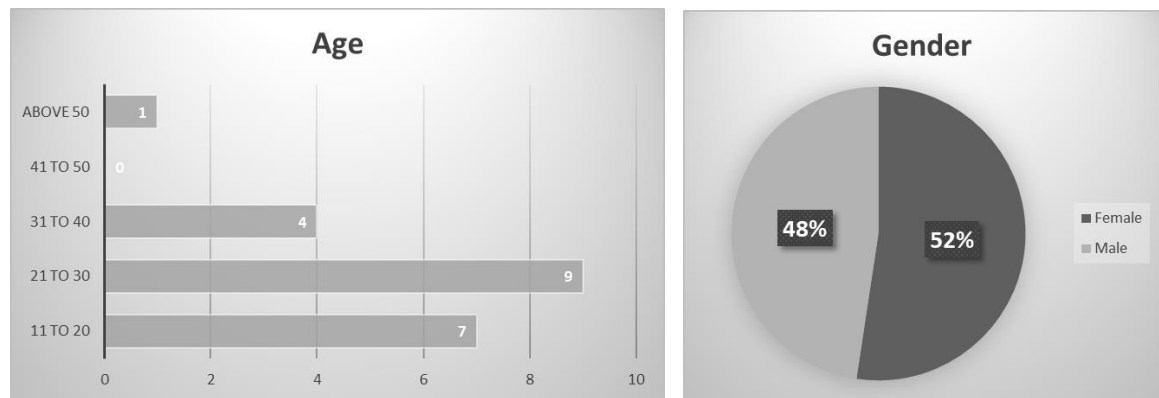
Before initiating the data collection process, the researchers conducted a comprehensive feasibility study to assess the operational, technical, and economic viability of implementing the prototype testing and survey administration at the Filipino Tech-Voc School. This assessment aimed to ensure the availability of necessary resources, compatibility of infrastructure, and sufficient budgetary allocation to carry out the research endeavors successfully.

The feasibility study yielded positive results across all three dimensions. The school demonstrated its operational readiness with available administrative personnel and stakeholders exhibiting adequate digital literacy. The technical infrastructure proved compatible with the requirements of the prototype testing, and the allocated budget was deemed sufficient to cover any potential costs. This high feasibility rating indicated a conducive environment for conducting the research activities and paved the way for successful data collection through surveys and prototype testing.

## 4.2 Demographic Statistics

**Table 3.** Demographic Characteristics of Admins and Students

Characteristics		Frequency	Percentage
Age	11 to 20	7	33%
	21 to 30	9	43%
	31 to 40	4	19%
	41 to 50	0	0%
	above 50	1	5%
Gender	Female	11	52%
	Male	10	48%



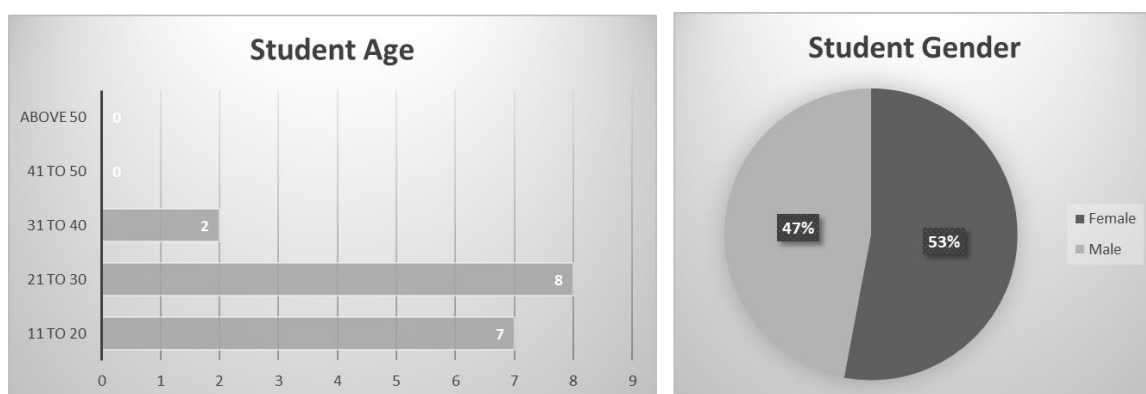
**Fig. 43.** Age and Gender Demographics of Admins and Students. This section outlines the demographic characteristics of the study participants.

The sample comprised 21 individuals, with the majority falling within the 21 to 30 age bracket (43%). Additionally, 33% of participants were between 11 and 20 years old, followed by 19% in the 31 to 40 age range. Participants over 50 years old constituted only 5% of the sample. Regarding gender distribution, the sample exhibited a relatively balanced representation, with 52% identifying as female and 48% identifying as male.

## Student Demographics

**Table 4.** Demographic Characteristics of Admins

Characteristics		Frequency	Percentage
Age	11 to 20	7	41%
	21 to 30	8	47%
	31 to 40	2	12%
	41 to 50	0	0%
	above 50	0	0%
Gender	Female	9	53%
	Male	8	47%



**Fig. 44.** Student Demographics Graphs. The student cohort consisted of 17 individuals, with the majority falling within the 21 to 30 age bracket (47%).

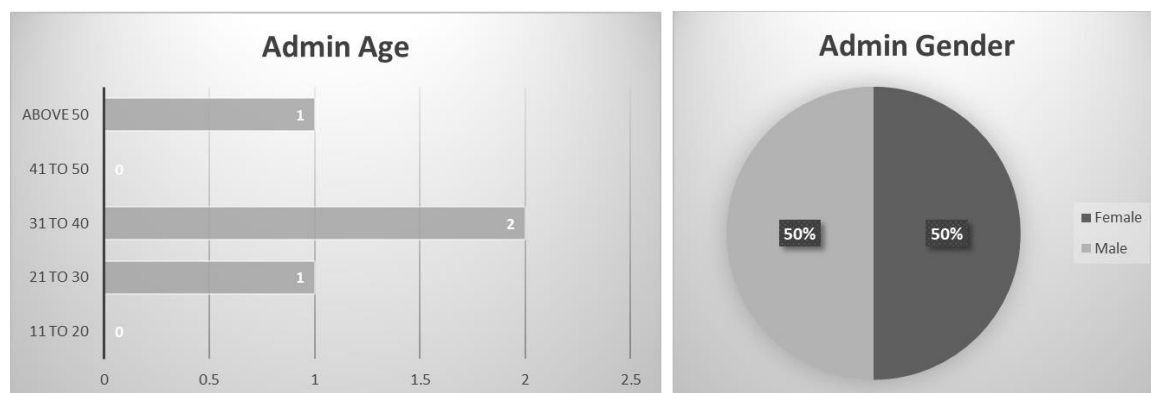
Notably, within this age group, a significant portion (41%) comprised incoming students aged 11 to 20 who pre-registered for a TVET course while awaiting scholarship availability. The remaining participants in the 21 to 30 range were school staff aged 21 and above who previously graduated from a TVET course offered by the school. Additionally, 12% of participants were in the 31 to 40 age range.

Regarding gender distribution, the student group exhibited a relatively even split, with 53% identifying as female and 47% identifying as male.

### Admin Demographics

**Table 5.** Admin Demographics

Characteristics		Frequency	Percentage
<b>Age</b>	11 to 20	0	0%
	21 to 30	1	25%
	31 to 40	2	50%
	41 to 50	0	0%
	above 50	1	25%
<b>Gender</b>	Female	2	50%
	Male	2	50%



**Fig. 45.** Admin Demographics Graphs. The administrative group comprised four individuals spanning a diverse age range. One participant fell within the 21 to 30 age category (25%), while two were in the 31 to 40 age bracket (50%).

The oldest female participant served as the school head, overseeing the enrollment process on occasion. Another female participant, also within the 31 to 40 age range, served as the registrar, offering occasional assistance with enrollment. The remaining two participants were male processing officers directly handling the enrollment process.

Regarding gender distribution, the administrative group displayed balance, equalizing two females (50%) and two males (50%).

### 4.3 Comparative Analysis using T-test and Wilcoxon Test

**Table 6.** JamoviComparative Analysis of Admins and Students

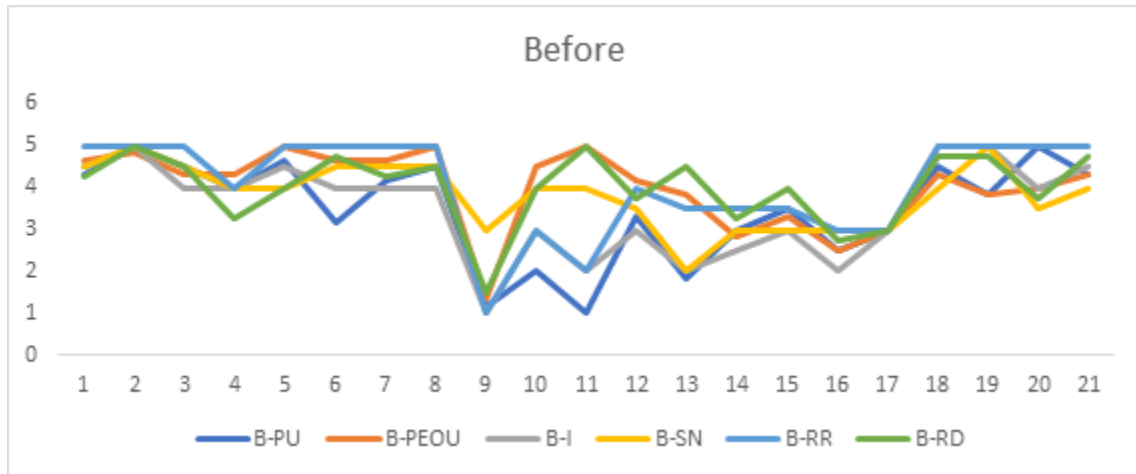
			Statistic	df	p	Mean difference	SE difference
AfterPU	BeforePU	Student's t	5.1956	20	< .001	1.3286	0.2557
		Wilcoxon W	171 <sup>a</sup>		< .001	1.4	0.2557
AfterPEOU	BeforePEOU	Student's t	2.3756	20	0.014	0.5381	0.2265
		Wilcoxon W	159.5 <sup>b</sup>		0.022	0.5	0.2265
AfterI	BeforeI	Student's t	4.254	20	< .001	1.0714	0.2519
		Wilcoxon W	117.5 <sup>d</sup>		< .001	1.5	0.2519
AfterSN	BeforeSN	Student's t	3.644	20	< .001	0.6429	0.1764
		Wilcoxon W	139.5 <sup>e</sup>		0.001	0.75	0.1764
AfterRR	BeforeRR	Student's t	3.0261	20	0.003	0.7905	0.2612
		Wilcoxon W	85 <sup>f</sup>		0.003	1.2501	0.2612
AfterRD	BeforeRD	Student's t	2.6232	20	0.008	0.4952	0.1888
		Wilcoxon W	116.5 <sup>g</sup>		0.006	0.6	0.1888

Note. H<sub>a</sub>  $\mu$  Measure 1 - Measure 2 > 0

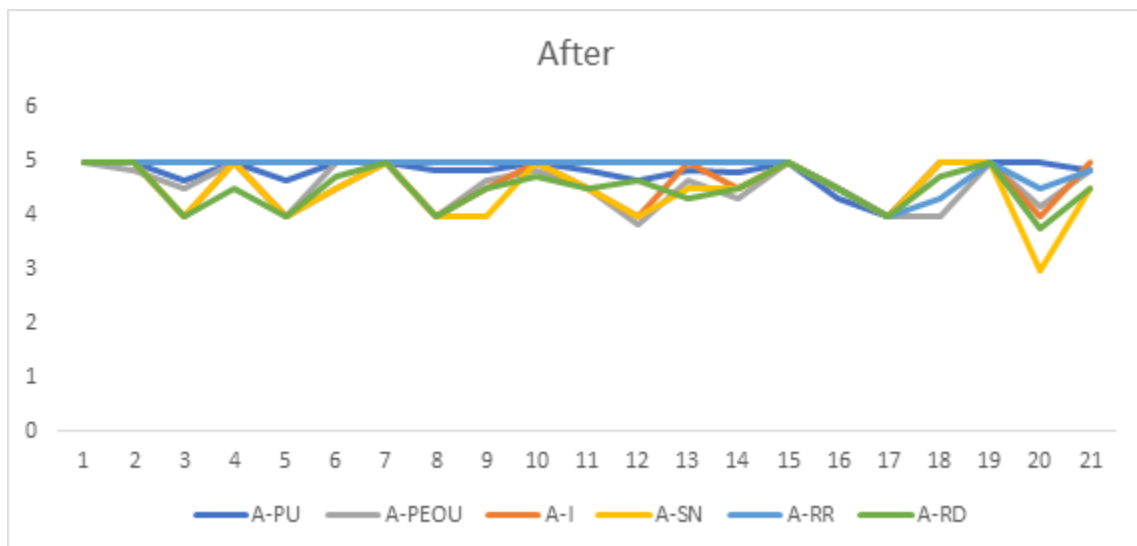
This analysis compared the survey results before (reflecting the current enrolment process) and after (reflecting the proposed student information system) implementation, obtained from the same participants among the total sample of 21 individuals. The hypothesis was structured as 'After > Before,' indicating that if the p-value is less than 0.05, the proposed system received significantly higher ratings than the current enrolment process used in BTES. The results indicated that the scores from the post-test were notably higher than those from the pre-test. All constructs exhibited p-values less than 0.01, indicating vital significance for the hypothesis that was set for this test which is 'Measure 1 (After) > Measure 2 (Before).'



The results suggested a preference for the proposed student information system prototype compared to the current enrolment process. Below is a line graph illustrating the survey's mean scores for the Before and After constructs.



**Fig. 46.** Pre-Test Result Line Graph. This line graph illustrates the survey mean scores before constructs.



**Fig. 47.** Post-Test Result Line Graph. This line graph illustrates the survey mean scores after constructs.

#### 4.4 Hypothesis Testing using Pearson's Correlation Coefficient and T-test

The hypotheses were interpreted based on two criteria: the p-value and Pearson's  $r$ -correlation coefficient. A p-value less than the significance level of 5%, denoted as  $\alpha =$

0.05, indicates statistical significance. Additionally, the correlation strength is assessed using Evans' (1996) guide: .00-.19 Very weak, .20-.39 Weak, .40-.59 Moderate, .60-.79 Strong, .80-1.0 Very strong.

**Table 7.** Tabulation of hypothesis testing

<b>Hypothesis Testing Using Pearson's r</b>	<b>P-value</b>	<b>Coefficient</b>	<b>Interpretation</b>	<b>Result</b>
<b>H1: PEOU positively affects PU</b>	0.008	0.5217	Significant Moderate	Accepted
<b>H2: PU positively affects I</b>	0.004	0.5692	Significant Moderate	Accepted
<b>H3: PEOU positively affects I</b>	< .001	0.7556	Significant Strong	Accepted
<b>H5: SN positively affects PU</b>	0.039	0.3942	Significant Weak	Accepted
<b>H6: RR positively affects PU</b>	0.002	0.5984	Significant Moderate	Accepted
<b>H7: RD positively affects PU</b>	0.012	0.4903	Significant Moderate	Accepted
<b>Hypothesis Testing Using T-test</b>	<b>P-value</b>	<b>Mean Difference</b>	<b>Interpretation</b>	<b>Result</b>
<b>H4: Admin <math>\neq</math> Student PU</b>	0.252	-0.1662	No Significant Difference	Rejected
<b>H4: Admin <math>\neq</math> Student PEOU</b>	0.773	0.0686	No Significant Difference	Rejected
<b>H4: Admin <math>\neq</math> Student I</b>	0.445	-0.1912	No Significant Difference	Rejected
<b>H4: Admin <math>\neq</math> Student SN</b>	0.686	0.125	No Significant Difference	Rejected
<b>H4: Admin <math>\neq</math> Student RR</b>	0.12	0.2451	Significantly Different	Accepted
<b>H4: Admin <math>\neq</math> Student RD</b>	0.896	0.0294	No Significant Difference	Rejected

The table above presents the results of hypothesis testing, which aims to distinguish the outcomes for each hypothesis.

H1, H2, and H3 contributed to the first and second specific objectives of this study, focusing on assessing perceived usefulness (PU) and perceived ease of use (PEOU) among administrators and students, as well as exploring their intention to use (I) towards the student information system prototype. All hypotheses under these objectives were

accepted, with p-values less than 0.05, indicating a significant correlation. Specifically, H1 and H2 exhibited a significantly moderate positive relationship, while H3 indicated a significantly strong positive relationship.

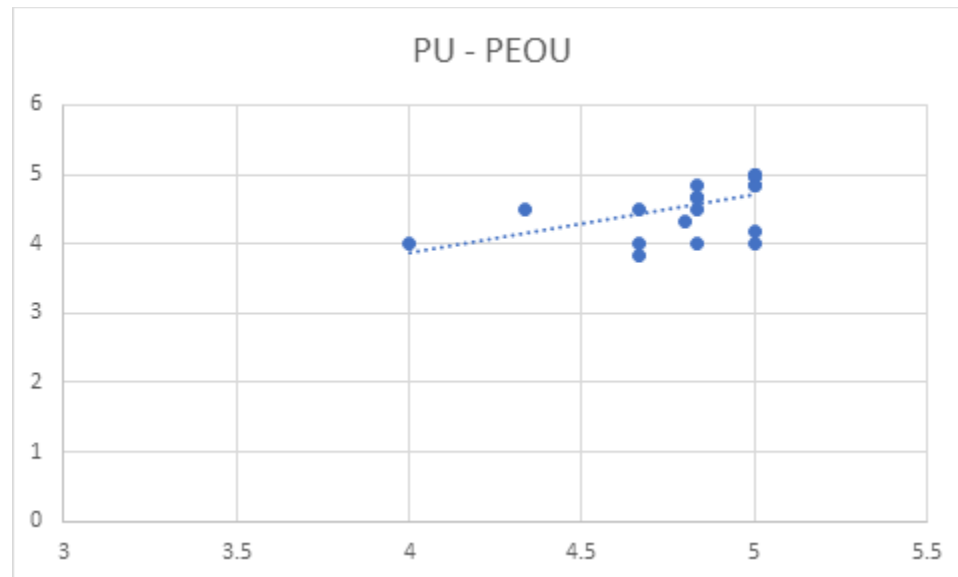
H5, H6, and H7 aligned with the fourth specific objective, aiming to determine the influence of external factors (Subjective Norm, Role Relevance, and Result Demonstrability) on the perceived usefulness of the system. Despite H5 showing a weak positive correlation compared to H6 and H7, which demonstrated moderate positivity, all three hypotheses exhibited significant correlations, providing meaningful insights into the impact of external factors on PU.

H4, related to the third specific objective, identified significant differences in acceptance levels between administrators and students. The comparison of TAM2 constructs between these two groups reveals that, except for Role Relevance, all other constructs showed insignificant differences with p-values greater than 0.05 and mean differences of less than 0.2. However, Role Relevance demonstrated a significant difference with a mean of 0.2451, supporting H4 albeit with weak evidence.

**Table 8.** Jamovi Correlation Analysis on PU, PEOU, and I

		S-PU	S-PEOU	S-I
S-PU	Pearson's r	—		
	df	—		
	p-value	—		
S-PEOU	Pearson's r	0.6677	—	
	df	15	—	
	p-value	0.002	—	
S-I	Pearson's r	0.6444	0.8676	—
	df	15	15	—
	p-value	0.003	< .001	—

*Note.* H<sub>a</sub> is positive correlation



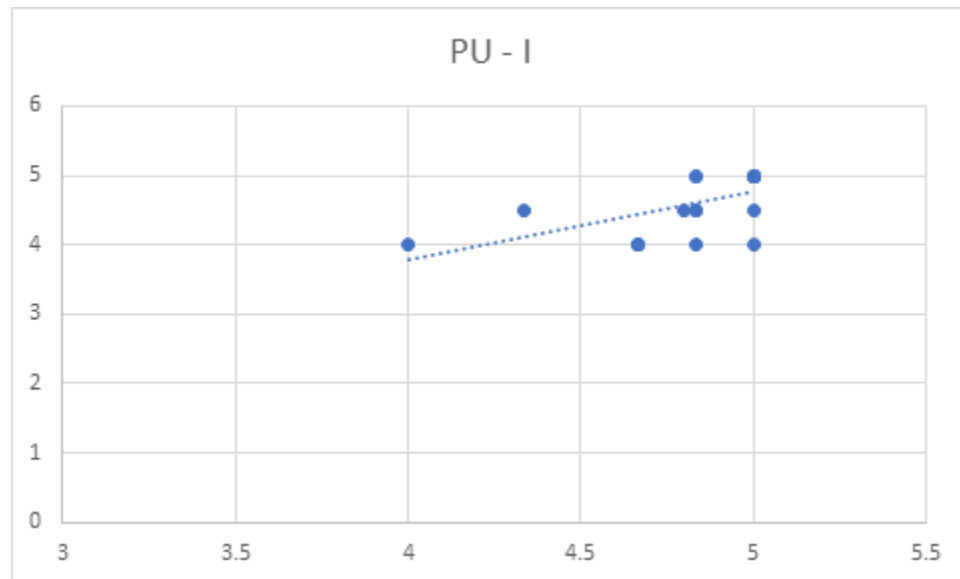
**Fig. 48.** PU-PEOU Scatter Plot. The scatter plot above illustrated a positive upward trend, confirming a positive correlation between PEOU and PU. This observation aligned with the hypothesis that users who found the system easier to use were more likely to perceive it as applicable.

**H1: Perceived Ease of Use (PEOU) positively affects Perceived Usefulness (PU).**

The calculation of the correlation coefficient between PEOU and PU resulted in 0.5217, falling within the range of .40 to .59, indicating a moderately positive relationship. The p-value was less than 5%, signifying a statistically significant relationship between the two variables. These findings supported the hypothesis, indicating that users who perceived the enrolment system as more accessible also tend to view it as more practical. It highlighted the importance of user-friendliness in shaping perceptions of the system's value and benefits.

While the correlation was statistically significant, it was essential to recognize that the strength of the relationship is moderate. It implied that while PEOU explained a portion

of the variance in PU, other factors, such as external influences, likely contribute to users' perceived usefulness.

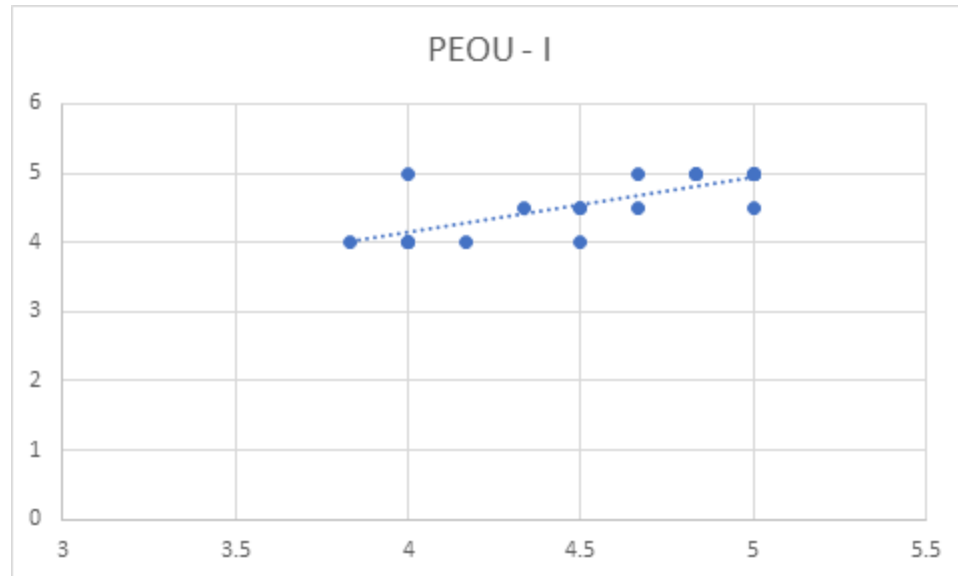


**Fig. 49.** PU-I Scatter Plot. The analysis revealed a statistically significant, moderately positive correlation between PU and I, with a correlation coefficient of 0.5692, falling within the range of .40 to .59. This indicates a positive relationship between the two variables.

**H2: Perceived Usefulness (PU) positively affects admins' and students' intention to use (I) the digitalized system.**

These findings supported the hypothesis, indicating that users who perceived the system as more useful were also more likely to express an intention to use it regularly. It underscored the importance of demonstrating the system's value and benefitted in encouraging its adoption within the school community.

While the correlation was statistically significant, it was essential to recognize that the strength of the relationship is moderate. The results suggested that while PU explained a portion of the variance in I, other factors, such as perceived ease of use, may influence users' intention to use the system.



**Fig. 50.** PEOU-I Scatter Plot. The analysis revealed a statistically significant, strong positive correlation between PEOU and I, with a correlation coefficient of 0.7556 and a p-value of less than 0.001. It indicates a clear positive relationship between the two variables.

**H3: Perceived Ease of Use (PEOU) positively affects admins and students' intention to use (I) of the digitalized system.**

These findings strongly supported the hypothesis, indicating that users who perceived the system as more straightforward to were significantly more likely to express an intention to use it regularly. It underscored the importance of prioritizing user-friendliness in the design and development of the digitalized system to encourage its adoption within the school community.

While the correlation was statistically significant and the strength of the relationship was relatively high, it was essential to acknowledge that other factors likely also influence users' intention to use the system.

**Table 9.** Jamovi Independent T-test

		Statistic	df	p	Mean difference	SE difference
PU	Student's t	-1.1823	19	0.252	-0.1662	0.1405
	Mann-Whitney U	19.5		0.181	-0.1666	
PEOU	Student's t	0.2923	19	0.773	0.0686	0.2348
	Mann-Whitney U	32		0.891	0	
I	Student's t	-0.7805	19	0.445	-0.1912	0.2449
	Mann-Whitney U	25		0.411	0	
SN	Student's t	0.4111	19	0.686	0.125	0.304
	Mann-Whitney U	31.5		0.85	0	
RR	Student's t	1.6275	19	0.12	0.2451	0.1506
	Mann-Whitney U	14		0.019	0.1667	
RD	Student's t	0.1323	19	0.896	0.0294	0.2223
	Mann-Whitney U	33.5		1	-0.0001	

Note.  $H_a: \mu_{\text{Student}} \neq \mu_{\text{Admin}}$

#### **H4: There is a significant difference between the admins and students.**

The analysis indicated that admins and students generally share similar perceptions regarding the digitalized system's usefulness, ease of use, intention to use, subjective norm, and result in demonstrability. However, a notable distinction emerged between the two groups' perceptions of role relevance.

To ensure the analysis's robustness, the hypothesis was tested using parametric (t-test) and non-parametric (Mann-Whitney U test) methods. The results revealed that, out of the seven constructs investigated, only role relevance (RR) exhibited a statistically significant difference between admins and students ( $p = 0.12$ ). Conversely, the p-values were more outstanding than 0.05 for all other constructs, indicating no statistically significant difference between the two groups.

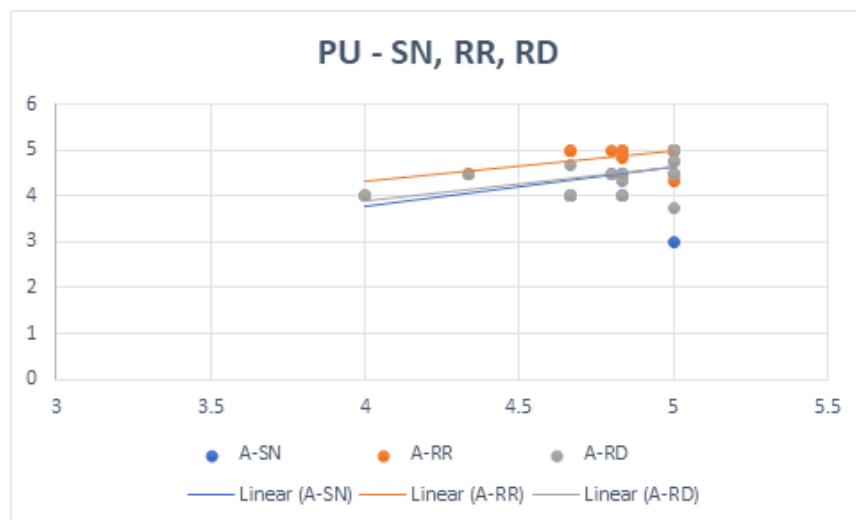
These findings partially supported the hypothesis. While a significant difference was observed for role relevance, suggesting that admins might perceive the system as more

relevant to their roles than students, the remaining constructs did not show significant group differences. The results suggested that admins and students likely had similar perceptions regarding the system's usefulness, ease of use, intention to use, subjective norm, and result demonstrability.

**Table 10.** Jamovi Correlation Analysis on PU, SN, RR, and RD

		PU	SN	RR	RD
PU	Pearson's r	—			
	df	—			
	p-value	—			
SN	Pearson's r	0.3942	—		
	df	19	—		
	p-value	0.039	—		
RR	Pearson's r	0.5984	0.2811	—	
	df	19	19	—	
	p-value	0.002	0.108	—	
RD	Pearson's r	0.4903	0.8503	0.3527	—
	df	19	19	19	—
	p-value	0.012	< .001	0.058	—

Note.  $H_a$  is positive correlation



**Fig. 51.** PU-SN, RR, RD Scatter Plot. The analysis revealed a statistically significant but weak positive correlation between Subjective Norm (SN) and Perceived Usefulness (PU), with a correlation coefficient of 0.3942 ( $p < 0.05$ ). The result indicates that users who



perceive social pressure from colleagues or superiors to use the system are likely to perceive it as applicable.

**H5: Subjective Norm (SN) has a positive effect on Perceived Usefulness (PU).**

While these findings partially supported the hypothesis by highlighting the role of social influence in shaping user perceptions of the system's value, the weak strength of the relationship suggested that other factors may have a more significant impact on perceived usefulness.

**H6: Role Relevance (RR) has a positive effect on Perceived Usefulness (PU).**

The analysis revealed a statistically significant and moderately strong positive correlation between Role Relevance (RR) and Perceived Usefulness (PU), with a correlation coefficient of 0.5984 ( $p < 0.001$ ). The result indicated that users who perceived the system as relevant and beneficial to their specific roles within the school community also tend to perceive it as more useful overall.

These findings supported the hypothesis, emphasizing the critical role of aligning the system with users' roles and responsibilities. When users perceived the system as directly addressing their needs and tasks, they were more likely to recognize its value and benefits.

**H7: Result Demonstrability (RD) has a positive effect on Perceived Usefulness (PU).**

The analysis revealed a statistically significant and moderately positive correlation between Result Demonstrability (RD) and Perceived Usefulness (PU), with a correlation coefficient of 0.4903 ( $p < 0.05$ ). The result suggested that users who perceived the system as capable of delivering clear and tangible results also tend to perceive it as more practical.

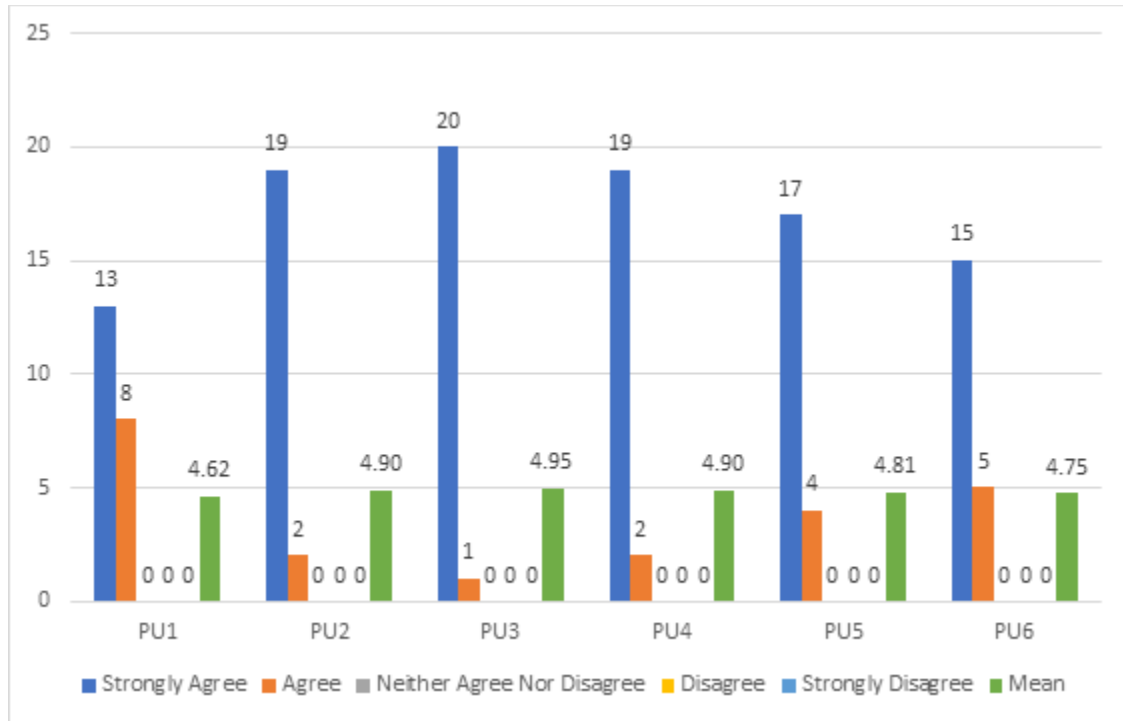
These findings supported the hypothesis, underscoring the importance of demonstrating the system's effectiveness and potential benefits to users. By highlighting

how the system can improve efficiency, solve problems, or provide valuable outcomes, users were more likely to recognize its usefulness and be motivated to adopt it.

Overall, the study explored the influence of external factors on perceived usefulness (PU), including Subjective Norm (SN), Role Relevance (RR), and Result Demonstrability (RD). All three factors exhibited positive relationships with PU, with correlation coefficients ranging from 0.3942 (SN) to 0.5984 (RR). While the strength of these relationships varied, all were statistically significant ( $p < 0.05$ ), highlighting the role of external factors in shaping users' perceptions of the system's value.

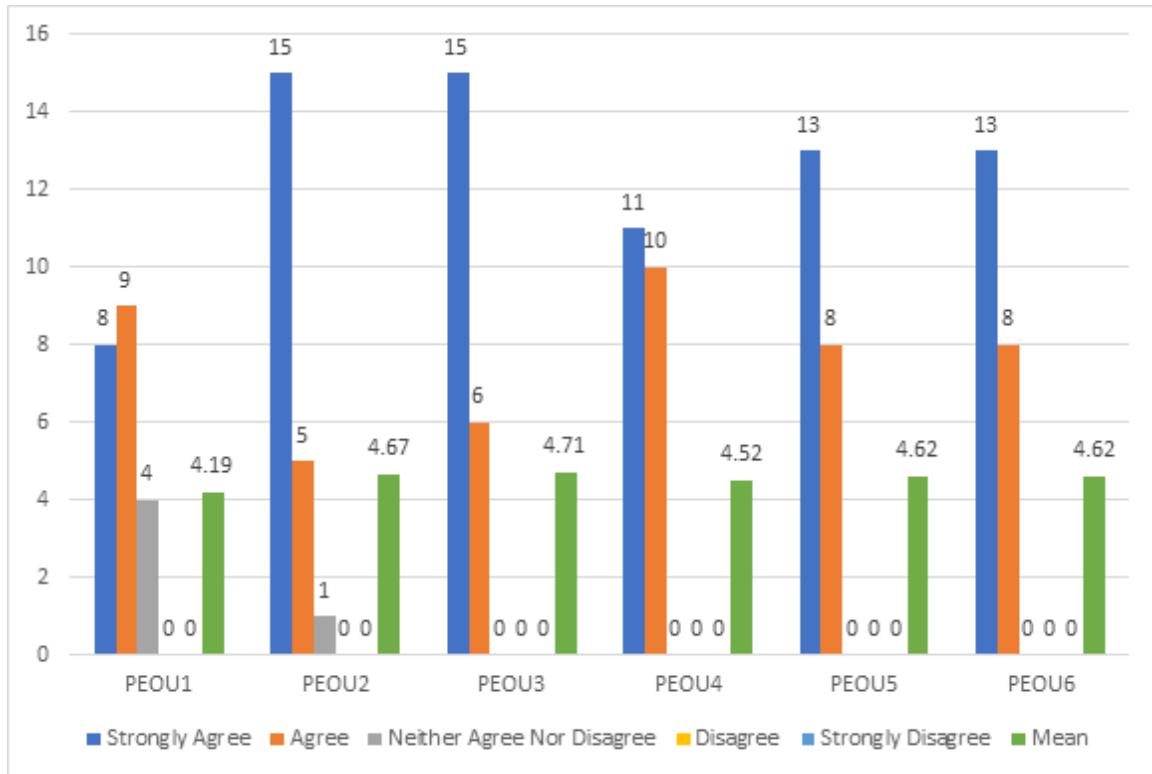
The study employed hypothesis testing, including Pearson's correlation coefficient and t-tests, to investigate user perceptions and their impact on the intention to use the digitalized enrolment system. The findings revealed statistically significant positive correlations between perceived ease of use (PEOU) and PU with intention to use (IU). It suggests that user-friendliness and perceived value contribute to users' willingness to adopt the system. T-tests identified a significant difference in role relevance (RR), with admins perceiving the system as more relevant. No significant differences were found for PU, PEOU, IU, subjective norm (SN), and result in Demonstrability (RD).

#### 4.5 Descriptive Results



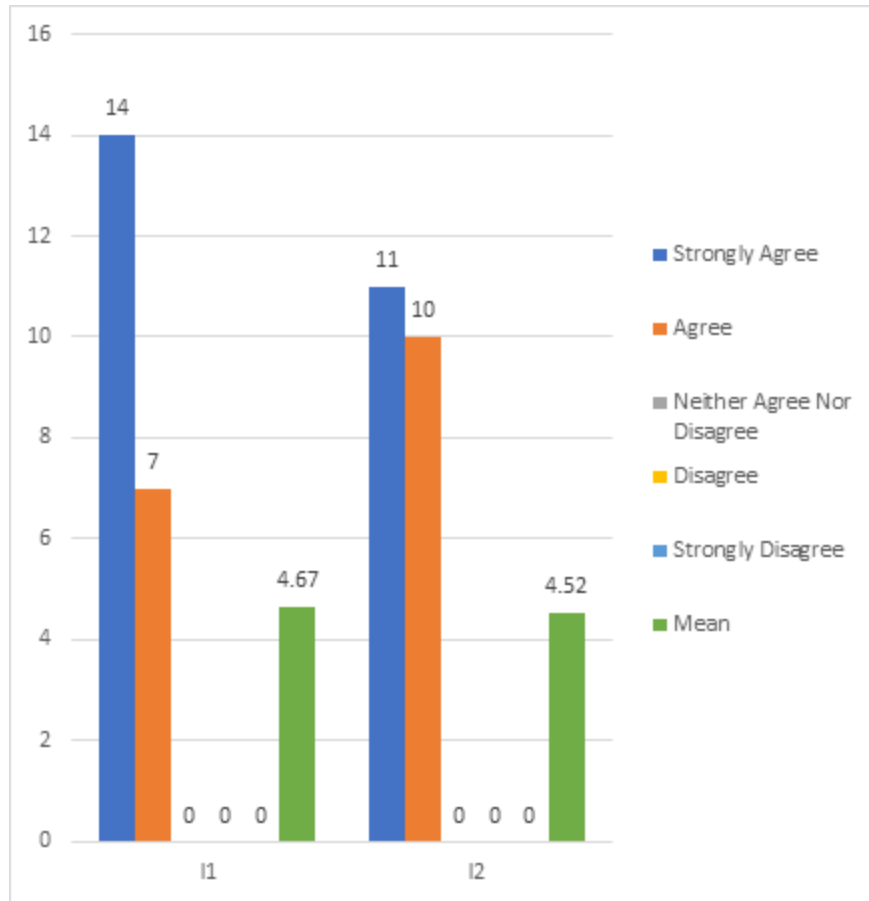
**Fig. 52.** Descriptive Summary of Perceived Usefulness (PU) of the Digitalized System. Figure 48 visually presents the average scores for each PU item, clearly representing participants' positive perceptions of the system's potential to enhance efficiency, performance, and effectiveness.

This construct pertains to participants' beliefs regarding how much the digitalized system would enhance their performance or effectiveness as students or administrators. The findings consistently indicate a favourable perception of the system's utility, as reflected in mean scores for all Perceived Usefulness (PU) items, ranging from 4.62 to 4.95. Notably, PU3 (Using the digitalized system would increase my productivity), PU2 (Using the digitalized system would improve my performance), and PU4 (Using the digitalized system would enhance my effectiveness) achieved the highest scores, with mean values between 4.90 and 4.95.



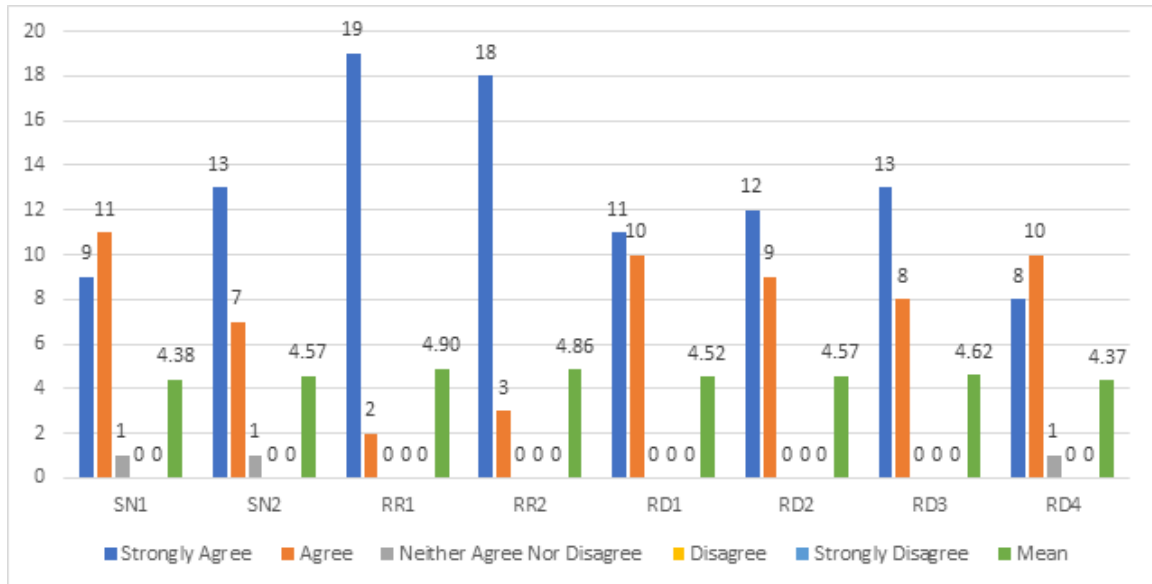
**Fig. 53.** Descriptive Summary of Perceived Ease of Use (PEOU) of the Digitalized System. Figure 49 visually represents the average scores for each PEOU item. While most items received positive ratings, PEOU1 (Learning to operate the digitalized system would be easy for me) attained the lowest mean score (4.19), indicating that some participants may require additional support or training to feel entirely comfortable with the system.

This construct evaluated participants' perceptions of the ease of learning and use associated with the system. Overall, the findings revealed positive sentiments, with mean scores for all Perceived Ease of Use (PEOU) items ranging from 4.19 to 4.71. Exceptionally, PEOU3 (My interaction with the digitalized system would be clear and understandable) and PEOU2 (I would find it easy to get the digitalized system to do what I want it to do) garnered the highest scores, with mean values between 4.67 and 4.71. It suggests that participants perceive the system as offering clear instructions and user-friendly functionality.



**Fig. 54.** Descriptive Summary of Intention to Use (I) on the Digitalized System. Figure 50 visually represents the average scores for each intention-to-use item. The positive mean scores and visualization support the conclusion that participants perceive the system as valuable and intend to utilize it upon accessibility.

This construct evaluated participants' willingness to use the digitalized system if it is accessible. Overall, the findings indicate positive intentions, with mean scores for both items ranging from 4.52 to 4.67. Specifically, I1 (Assuming I have access to the system, I intend to use it) received a slightly higher mean score (4.67) compared to I2 (Given that I have access to the system, I predict that I would use it) (4.52). These results, consistent with the Technology Acceptance Model (TAM) (Davis, 1989), suggest that admins and students generally intend to incorporate the system into their work or studies.



**Fig. 55.** Descriptive Summary of Subjective Norm (SN), Role Relevance (RR), and Result Demonstrability (RD) of the Digitalized System. Figure 51 provides a visual representation of the average scores for each external factor item, offering further insights into the influence of these factors on user perceptions.

This section examined three external factors that influence user perceptions: Subjective Norm (SN), Role Relevance (RR), and Result Demonstrability (RD).

**Subjective Norm:** Participants generally agreed that individuals vital to them believe they should use the system (SN2, mean = 4.57), with slightly higher agreement compared to the broader statement about influential people (SN1, mean = 4.38). It indicated that the opinions of close figures carried more weight in shaping their perceptions.

**Role Relevance:** Both statements regarding the system's relevance to student and admin roles received notably high mean scores (RR1 = 4.90, RR2 = 4.86), indicating substantial agreement among participants. It suggested that students and admins perceived the system as valuable and directly applicable to their academic responsibilities.

**Result Demonstrability:** Participants generally expressed confidence in explaining and communicating the system's results (mean scores ranging from 4.37 to

4.62). RD3 (mean = 4.62) received the highest score, indicating that participants quickly articulated the positive outcomes of using the system.

The findings revealed positive perceptions of usefulness (PU) and ease of use (PEOU) among participants, addressing objective 1 of the study. High scores on PU items related to productivity, performance, and effectiveness suggest that users perceived the system as beneficial to their work or studies. Similarly, positive mean scores for PEOU items indicated that participants found the system transparent, understandable, and easy to learn and use.

Objective 2, which focused on intention to use (I), yielded positive results, with participants expressing a willingness to utilize the system if available. Both intention statements received high mean scores, aligning with the TAM model and indicating potential system adoption.

#### **4.6 Implication**

The study's findings offer valuable insights for various stakeholders involved in implementing digitalized systems in educational settings, particularly those within small Muslim communities:

**Educational institutions:** Understanding stakeholders' perceptions and acceptance levels can inform decision-making, shape system implementation strategies, and improve adoption rates.

**Developers of digitalized enrolment systems:** Insights can guide the design of user-friendly systems that align with stakeholders' needs and expectations, enhancing system effectiveness.

**Future researchers:** The study would pave the way for exploring additional factors influencing acceptance, long-term impacts of system implementation, and comparisons across different institutions.

**Professional development initiatives:** Findings can inform the development of targeted training programs and support mechanisms to address specific factors influencing system acceptance and promote successful adoption.

#### **4.7 Limitations**

The study acknowledged several limitations that may affect the generalizability and interpretation of its findings. The five-month compressed timeframe encompassed all research phases, including planning, prototype development, testing, and data analysis. This focused on efficiency necessitated relying primarily on offline data collection methods. Participants completed paper-based questionnaires and watched a video demonstration of the prototype during the evaluation stage. While this approach streamlined data collection and analysis within the given timeframe, it potentially limited the richness and depth of data compared to scenarios involving online interactions or extended exposure to the prototype in a real-world setting.

Secondly, prototype development was intentionally restricted to Figma's platform and compatible tools to ensure a focused and efficient development process. However, this choice limited the exploration of alternative platforms with potentially different functionalities, which could have influenced user experience and perceptions of the system.

Furthermore, the study employed physical copies of the survey questionnaire and surveyed a limited portion of the population. This reliance on offline administration and a restricted sample size restricts the generalizability of the findings to the specific



participants involved. It may not accurately represent the broader student and administrator population.

Additionally, the study acknowledged the potential for biases influencing participant responses. Social desirability bias, where participants tend to answer in a way they perceive as socially desirable, could have affected the accuracy of their responses. Moreover, limited exposure to the prototype during the evaluation might have skewed perceptions of its usability and usefulness.

Finally, while reliable, the chosen survey instrument may only capture part of the factors influencing technology acceptance. Additionally, potential limitations of specific scales used to measure variables, such as internal consistency or sensitivity, could have affected the accuracy of the findings.

## **5. Conclusion**

This study investigated the perceived usefulness, ease of use, and intention to use a proposed student information system among administrators and students at BTES. It also explored the influence of external factors on perceived usefulness.

The findings revealed unanimous positive acceptance and willingness to adopt the system from all participants. The result suggested the potential of the system to streamline administrative processes and enhance student experiences. These insights were relevant for tech-voc schools and Muslim communities within BARMM considering digitalization efforts.

While limitations like the sample size and lack of backend functionality exist, further research was encouraged to address these and explore broader impacts. The study contributed to the understanding of technology acceptance in educational settings, paving

the way for further advancements and promoting the transformative potential of digitalization within Muslim communities.

Overall, the study contributed to the understanding of technology acceptance in educational settings, paving the way for further advancements and promoting the transformative potential of digitalization within Muslim communities.

### **Recommendation for Further Study**

The study's findings would pave the way for future research and system enhancement endeavors to advance technology integration in educational settings, particularly within Muslim communities. These advancements can potentially contribute to the broader progress of educational institutions and ultimately benefit diverse communities by improving access, efficiency, and overall educational quality.

To gain a deeper understanding of technology acceptance within educational institutions, future research could explore various user experience factors beyond the scope of this study. It should include investigating the influence of user training programs, support mechanisms, and organizational culture on system adoption. Additionally, delving into factors like leadership style and institutional readiness could provide a more comprehensive picture of the complex dynamics shaping technology acceptance.

Furthermore, longitudinal studies tracking system usage patterns, user satisfaction levels, and overall organizational outcomes over an extended period would offer valuable insights into digitalized systems' long-term sustainability and effectiveness. Moreover, conducting comparative studies across diverse educational contexts, including different geographic regions and socio-cultural settings, could facilitate a deeper understanding of the universality of technology acceptance patterns. By examining variations in acceptance

levels and adoption behaviors across contexts, researchers can tailor implementation strategies to address different educational environments' specific needs and challenges.

The prototype can be further enhanced based on stakeholder feedback to improve its realism and user engagement. Integrating authentic imagery and documentation from the school, such as photographs of facilities and equipment, could enhance the prototype's appeal. Additionally, incorporating features related to scholarship benefits and alums success stories would provide valuable information to prospective students and stakeholders, further highlighting the educational institution's offerings. Finally, customizing the prototype's branding and color scheme to align with the school's identity could foster a stronger sense of institutional identity and improve user engagement.

It is crucial to acknowledge certain limitations of the study. Firstly, focusing on a sample rather than the entire school population may limit the generalizability of the findings. Future research could address this by expanding the sample size or employing alternative sampling methods. Additionally, the prototype's lack of backend functionality underscores the need for further development to simulate real-world usage scenarios fully. Incorporating database management and backend processes would provide a more accurate representation of the system's capabilities and enhance its utility for stakeholders.

Furthermore, the impact of this research extends beyond the confines of the BTES community. Given the prevalence of tech-voc schools and the growing interest in digitalizing processes within Muslim communities around BARMM, the insights gleaned from this study hold significant relevance. By shedding light on the acceptance and usability of digitalized systems in an educational context, this research contributes to the ongoing efforts to modernize and improve educational practices within these communities.

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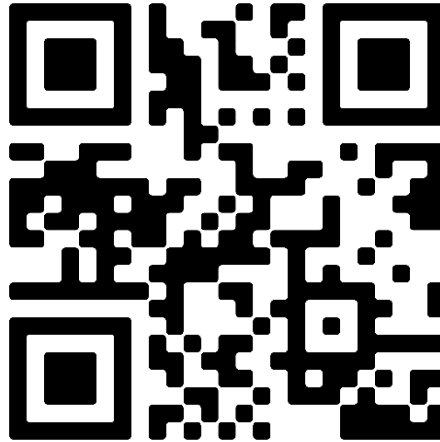
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## APPENDIX A

### SYSTEM PROTOTYPE

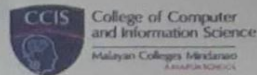


Figma Prototype Link: <http://tiny.cc/u5e4xz>



## APPENDIX B

### LETTER TO MRS. FLORA UY SALENDAB



**Mrs. Flora Uy Salendab**

School President, Buluan Technical Educational School of Life, Inc. - BTESLife, Inc.  
National Highway, Brgy. Poblacion 9616 Buluan, Philippines

Dear Sir / Madam:

Greetings!

The undersigned are fourth-year Bachelor of Science Information Systems students of Mapua Malayan Colleges Mindanao and are currently enrolled in IS200D-1 - Capstone Project 1.

You have been chosen to be the client institution that will be the recipient of the solution software we will produce in our study. In connection with this, we humbly ask permission from your good office to conduct a thorough data gathering and investigation of the institution's business operations regarding the particular transaction, such as the enrollment process and information management processes of the enrollees. We also would like to ask for your commitment to assist us in this endeavor. This will help the group create a high-quality software solution that will help improve how you do things in your institution.

Your favorable response is highly appreciated.

Respectfully Yours,

*Fin*  
ABDUL AZIZ M. UY      MOHAMMAD L. DAMPA      ALFRED ASHLEY F. ANDRION  
[STUDENTS' NAMES AND SIGNATURE]

Noted by:

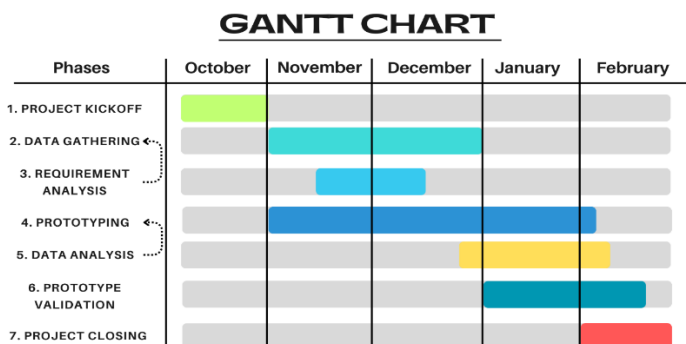
*Martzel P. Baste*  
MARTZEL P. BASTE  
CS103P Adviser

*Flora Uy Salendab*  
Conforme: FLORA UY SALENDAB

Date: 9/19/23

## APPENDIX C

### GANTT CHART



The project commences with a kickoff in October, setting the stage for subsequent activities and establishing the foundation for the system's development. Following the kickoff, the next critical phase—data gathering and requirement analysis—begins in early November and concludes by the end of December. This period is crucial for collecting the necessary data and understanding the specific requirements to develop a functional system prototype. The timeline is strategically planned to afford the research team ample time for data collection and developing a working prototype, facilitating successful data collection efforts.

By the conclusion of December, the focus shifts towards finalizing the project prototype. This phase is slated to end by January, marking the transition from development to evaluation. January is earmarked for project validation, where the developed system undergoes rigorous testing and evaluation to gather insights on user acceptance. This validation phase is pivotal, as it directly influences the analysis of the program's acceptance among its intended users.

## APPENDIX D

### REQUEST FOR SURVEY PARTICIPATION

Abdul Aziz M. Uy  
Alfred Ashley F. Andrion  
Mohaimen L. Dampac  
4th year student  
Mapua Malayan Colleges Mindanao  
General Douglas, MacArthur Highway, Matina, Davao City, Davao City, Philippines  
1/24/2024

Flora U. Salendab  
School President  
Buluan Technical Educational School for Life  
National Highway, Brgy. Poblacion, Buluan, Philippines

Dear Mrs. Salendab,

Subject: Request for Survey Participation


I hope this letter finds you well. We are group IS-003 of the capstone course in Mapua Malayan colleges Mindanao. In partial fulfillment of our capstone project, we are reaching out to you with a request for collaboration to conduct a survey for our capstone project.

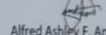
The purpose of this letter is to ask for permission for our group to administer survey to the school staff and students. As part of our research, we would like to gather insights from both staff and previous trainees/students in the TVET course of your school. The survey will be conducted offline and will involve a brief questionnaire that focuses on the participants' perspective in terms of technology acceptance through a prototype demo. Participation is voluntary, and all responses will be kept confidential. We anticipate that the survey will take approximately 10 minutes to complete. To facilitate this process, we kindly request permission to distribute the survey to BTES staff and previous trainees/students on the day of the survey administration.


We understand the importance of your staff and students' time, and we assure you that the data collected will be used for research purposes only. Once the survey is complete, we would be happy to share the aggregated findings with you and discuss any potential insights that may be of interest.

We sincerely appreciate your consideration of this request and look forward to the possibility of collaboration. Thank you for your time and support.

Yours sincerely,

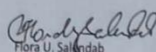
  
Absul Aziz M. Uy  
4<sup>th</sup> year Student

  
Alfred Ashley F. Andrian  
4<sup>th</sup> year Student

  
Mohaimen L. Dampac  
4<sup>th</sup> year Student

  
Marizel Baste  
Adviser

Neil Magloyuan  
Capstone Facilitator

  
Flora U. Salandab  
BTES Life School Head

## APPENDIX E

### SURVEY QUESTIONNAIRE

#### Admin Questionnaire

Please mark with a / the extent to which you agree with the following statements where 1

= Extremely disagree and 7=Extremely agree.

Digitalized System Questionnaire	1	2	3	4	5
1. Using the digitalized system in my job would enable me to accomplish tasks more quickly					
2. Using the digitalized system would improve my job performance					
3. Using the digitalized system in my job would increase my productivity.					
4. Using the digitalized system would enhance my effectiveness on the job.					
5. Using the digitalized system would make it easier to do my job.					
6. I would find the digitalized system useful in my job.					
7. Learning to operate the digitalized system would be easy for me.					
8. I would find it easy to get the digitalized system to do what I want it to do.					
9. My interaction with the digitalized system would be clear and understandable.					
10. I would find the digitalized system would be clear and understandable.					
11. It would be easy for me to become skillful at using the digitalized system.					
12. I would find the digitalized system easy to use.					
13. Assuming I have access to the system, I intend to use it.					
14. Given that I have access to the system, I predict that I would use it.					
15. People who influence my behavior think that I should use the system.					
16. People who are important to me think that I should use the system.					
17. In my job, usage of the system is important.					
18. In my job, usage of the system is relevant.					
19. I have no difficulty telling others about the results of using the system.					

20. I believe I could communicate to others the consequences of using the system.					
21. The results of using the system are apparent to me.					
22. I would have difficulty explaining why using the system may or may not be beneficial.					
Gender:					
Age:					

## Admin Questionnaire

Please mark with a / the extent to which you agree with the following statements where 1

= Extremely disagree and 7=Extremely agree.

Current Enrollment Process Questionnaire	1	2	3	4	5
1. Using the current enrollment process in my job enables me to accomplish tasks more quickly					
2. Using the current enrollment process improves my job performance					
3. Using the current enrollment process in my job increases my productivity.					
4. Using the current enrollment process enhances my effectiveness on the job.					
5. Using the current enrollment process makes it easier to do my job.					
6. I find the current enrollment process useful in my job.					
7. Learning to operate the current enrollment process is easy for me.					
8. I find it easy to get the current enrollment process to do what I want it to do.					
9. My interaction with the current enrollment process is clear and understandable.					
10. I find the current enrollment process clear and understandable.					
11. It would be easy for me to become skillful at using the current enrollment process.					
12. I find the current enrollment process easy to use.					
13. Assuming I have access to the current enrollment process, I intend to use it.					
14. Given that I have access to the current enrollment process, I predict that I would use it.					
15. People who influence my behavior think that I should use the current enrollment process.					
16. People who are important to me think that I should use the current enrollment process.					

17. In my job, usage of the current enrollment process is important.					
18. In my job, usage of the current enrollment process is relevant.					
19. I have no difficulty telling others about the results of using the current enrollment process.					
20. I believe I could communicate to others the consequences of using the current enrollment process.					
21. The results of using the current enrollment process are apparent to me.					
22. I would have difficulty explaining why using the current enrollment process may or may not be beneficial.					
Gender:					
Age:					

### Student Questionnaire

Please mark with a / the extent to which you agree with the following statements where 1 = Extremely disagree and 7=Extremely agree.

Digitalized System Questionnaire	1	2	3	4	5
1. Using the digitalized system would enable me to accomplish tasks more quickly					
2. Using the digitalized system would improve my performance					
3. Using the digitalized system would increase my productivity.					
4. Using the digitalized system would enhance my effectiveness.					
5. Using the digitalized system would make it easier to do my tasks.					
6. I would find the digitalized system useful as a student.					
7. Learning to operate the digitalized system would be easy for me.					
8. I would find it easy to get the digitalized system to do what I want it to do.					
9. My interaction with the digitalized system would be clear and understandable.					
10. I would find the digitalized system would be clear and understandable.					
11. It would be easy for me to become skillful at using the digitalized system.					
12. I would find the digitalized system easy to use.					
13. Assuming I have access to the system, I intend to use it.					
14. Given that I have access to the system, I predict that I would use it.					

15. People who influence my behavior think that I should use the system.					
16. People who are important to me think that I should use the system.					
17. As a student, usage of the system is important.					
18. As a student, usage of the system is relevant.					
19. I have no difficulty telling others about the results of using the system.					
20. I believe I could communicate to others the consequences of using the system.					
21. The results of using the system are apparent to me.					
22. I would have difficulty explaining why using the system may or may not be beneficial.					
Gender:					
Age:					

### Student Questionnaire

Please mark with a / the extent to which you agree with the following statements where 1 = Extremely disagree and 7=Extremely agree.

Current Enrollment Process Questionnaire	1	2	3	4	5
1. Using the current enrollment process enables me to accomplish tasks more quickly					
2. Using the current enrollment process improves my performance					
3. Using the current enrollment process increases my productivity.					
4. Using the current enrollment process enhances my effectiveness.					
5. Using the current enrollment process makes it easier as a student.					
6. I find the current enrollment process useful as a student.					
7. Learning to operate the current enrollment process is easy for me.					
8. I find it easy to get the current enrollment process to do what I want it to do.					
9. My interaction with the current enrollment process is clear and understandable.					
10. I find the current enrollment process clear and understandable.					
11. It would be easy for me to become skillful at using the current enrollment process.					
12. I find the current enrollment process easy to use.					



13. Assuming I have access to the current enrollment process, I intend to use it.					
14. Given that I have access to the current enrollment process, I predict that I would use it.					
15. People who influence my behavior think that I should use the current enrollment process.					
16. People who are important to me think that I should use the current enrollment process.					
17. As a student, usage of the current enrollment process is important.					
18. As a student, usage of the current enrollment process is relevant.					
19. I have no difficulty telling others about the results of using the current enrollment process.					
20. I believe I could communicate to others the consequences of using the current enrollment process.					
21. The results of using the current enrollment process are apparent to me.					
22. I would have difficulty explaining why using the current enrollment process may or may not be beneficial.					
Gender:					
Age:					