



E- ISSN: 2980-4760  
P- ISSN: 2980-4752

DOI: 10.17613/ft17-bn43

# Improving Responsiveness to Stakeholders: A Mobile Application of Selected School Services for the Mary Perpetua E. Briosso National High School

**Gregorio A. Legal, EdD**

[gregorio.legal001@deped.gov.ph](mailto:gregorio.legal001@deped.gov.ph)

Chief Education Supervisor, SGOD, Schools Division of Masbate City  
Masbate City, Philippines

 **International Journal of Multidisciplinary Educational Research and Innovation** is an international peer-reviewed academic journal that highly values the importance of developing knowledge in multidisciplinary educational and innovative research. The journal's scope is broad, with the goals of disseminating information and providing a place for discussion, theoretical inquiry, practical applications, research discoveries, and experimentations in the field of education.

## Recommended Citation

Legal, G. (2023). Improving Responsiveness to Stakeholders: A Mobile Application of Selected School Services for the Mary Perpetua E. Briosso National High School. *International Journal of Multidisciplinary Educational Research and Innovation*. 1(4), 252-269. <https://doi.org/10.17613/ft17-bn43>.

Authors retain copyright. Articles published under a Creative Commons Attribution 4.0 (CC-BY) International License. This license allows this work to be copied, distributed, remixed, transformed, and built upon. An appropriate attribution is given, a link is provided to the license, and changes made are indicated.





# IMPROVING RESPONSIVENESS TO STAKEHOLDERS: A MOBILE APPLICATION OF SELECTED SCHOOL SERVICES FOR THE MARY PERPETUA E. BRIOSO NATIONAL HIGH SCHOOL

Gregorio A. Legal, EdD<sup>1</sup>

<sup>1</sup>Schools Division of Masbate City, Masbate City, Philippines



## ABSTRACT

This capstone project aimed to enhance the operational efficiency of school transactions at Mary Perpetua E. Brioso National High School (MPEBNHS) in response to challenges posed by the COVID-19 pandemic. This goal was achieved by developing and implementing the Mobile-Based Selected School Services Application, "iSkulSerb." The development of iSkulSerb followed the systematic approach of Borg and Gall's (1983) Research and Development (R&D) methodology for creating and validating educational products. To ensure the validity and reliability of the application, it underwent rigorous examination by both IT and education experts. Additionally, survey questionnaires were administered during the project's implementation to assess the impact of iSkulSerb's features on school stakeholders. The research findings highlighted positive perceptions and outcomes related to iSkulSerb. Stakeholders demonstrated a favorable acceptance of the application, as evidenced by an overall weighted mean of 4.34. The accessibility of school services saw a substantial improvement, reflected in the weighted mean of 4.37. User-friendliness also received positive feedback, with an overall weighted mean of 4.27. These findings suggest that iSkulSerb effectively addresses the challenges faced by the school, contributing to enhanced operational efficiency and improved stakeholder experiences. Given the demonstrated reliability and efficacy of iSkulSerb, there is a compelling case for its widespread adoption across other public schools within the Schools Division of Masbate Province. The positive reception and success metrics indicate that iSkulSerb can serve as a benchmark for other regional schools.

Received: August 2023  
Revised: September 2023  
Accepted: October 2023  
Available: November 2023

**Keywords:** capstone project, operational efficiency, school transactions, COVID-19 pandemic

## INTRODUCTION

The 1987 Philippine Constitution, Article 14, Section 2, mandates the State to uphold a comprehensive and relevant educational system that aligns with the populace's needs and society (Philippines, 1987). This constitutional provision underscores the Department of Education's (DepEd) primary role in formulating and executing policies, programs, activities, and projects related to formal and non-formal primary education. DepEd's mandate extends to the supervision of all elementary and secondary educational institutions, both public and private, and the promotion of a comprehensive basic education system in harmony with national development objectives (DepEd, n.d.).



Authors retain copyright. Articles published under a Creative Commons Attribution 4.0 (CC-BY) International License. This license allows this work to be copied, distributed, remixed, transformed, and built upon for any purpose provided that appropriate attribution is given, a link is provided to the license, and changes made were indicated.

As characterized by the Department of Education (2001) itself, DepEd functions as a "learner-centered public institution." To effectively serve its stakeholders and cater to the learning needs of the people and society, DepEd must adopt and endorse continuous improvement initiatives. These initiatives align with a long-term vision of transforming DepEd into a modern, professional, proactive, agile, trusted, and nurturing institution by 2022. The overarching aim is to provide a K to 12 Basic Education program that is "quality, accessible, relevant, and liberating" and empowers students to be "nation-loving, resilient, and competent lifelong learners" (DepEd, 2020; Nayra, 2021). This vision is embraced by officials and staff at all levels of governance within the DepEd structure, driving them to fulfill their roles consistently with the organization's vision, mission, and core values.

Republic Act 11032, also known as the Ease of Doing Business and Efficient Government Service Delivery Act of 2018, establishes a policy by Section 2, promoting integrity, accountability, and prudent administration of public affairs and property. This policy also focuses on building effective methods to ensure the prompt delivery of government services and eradicate bribery and corruption in government (7th Congress, 2017). The Act also emphasizes expediting feedback and process results across all government agencies.

The demands generated by this mandate have intensified the workload of the DepEd, resulting from the growing need for labor. To address these demands at all levels of governance, the DepEd is structured into one Central Office, 17 Regional Offices, and 223 Schools Division Offices, collectively employing a vast workforce of 772,710 individuals. The Department of Education oversees 38,934 public elementary schools, 9,001 public secondary schools, 12,759 private elementary schools, and 7,033 private secondary schools. From 2018 to 2022, DepEd delineated three main goals: organizational alignment, a Quality Management System (QMS) implementation, and a thorough review of the school's organizational structure.

President Rodrigo R. Duterte, in his inaugural State of the Nation Address in 2017, underscored a clear directive to streamline government agency services, aiming for increased efficiency and a more user-friendly approach. To align with this directive, Executive Order No. 605, issued in 2007, mandated that national government agencies implement a government quality management program if they met ISO 9001 criteria. Further, the Government Quality Management Committee (GQMC) issued Memorandum Circular No. 2018-1, outlining the procedures for validating ISO 9001:2005 Quality Management System Certification as part of the FY 2018 Performance-Based Bonus (PBB) requirements. The DepEd National QMS (2018-2022) will progress through its Quality Management System (QMS) stages as a beneficiary of the 2018 Government Quality Management Program (GQMP) by the Development Academy of the Philippines (DAP) (Nayra, 2019).

One of the significant strategies to be employed is the convergence into "One DepEd, One National Quality Management System." This approach aims to help DepEd actualize its vision, mission, and core values and address emerging challenges. The challenges faced prompted the development of transformative solutions, including organizational alignment, implementing a Quality Management System (QMS), and reassessing the school's organizational structure (Nayra, 2021). This transformational journey toward service excellence promises to be engaging and fruitful.

Furthermore, in compliance with Section 6 of RA 11032, all government agencies must display their most current and updated service standards, known as Citizen's Charters, in conspicuous locations within their offices. These standards should also be made available on the agencies' websites and through published materials in English, Filipino, or the local dialect. The Citizen's Charter must include a comprehensive checklist of requirements for various types of applications or requests, the procedure for obtaining a particular service, the individuals responsible for each step, the maximum time required



Authors retain copyright. Articles published under a Creative Commons Attribution 4.0 (CC-BY) International License. This license allows this work to be copied, distributed, remixed, transformed, and built upon for any purpose provided that appropriate attribution is given, a link is provided to the license, and changes made were indicated.

to conclude the process, the necessary documents, fees (if applicable), and the procedure for filing complaints (Contact Center ng Bayan, 2019).

Delivering quality essential education services, the cornerstone of nation-building is intrinsically linked to effective school leadership and management. School leaders and managers must enhance their competencies to meet the learning needs of students under all circumstances, including emergencies and disasters, to improve educational outcomes. In light of the challenges posed by the COVID-19 pandemic, there is an increased urgency to support schools in navigating the crisis and streamlining business operations. The Anti-Red Tape Authority (ARTA) recognized this need by issuing Memorandum Circular No. 6 Series of 2020, which outlines guidelines for issuing permits and licenses in the "new normal."

The ARTA's memorandum circular aligns with RA 11032 and emphasizes modernizing regulatory procedures and documentation requirements within government agencies. It underscores the need to adapt to the "new normal" characterized by social distancing and health protocols mandated by the IATF due to COVID-19. The circular emphasizes that the ongoing pandemic should not justify government agencies to disregard established processing timelines (ARTA Memorandum Circular No. 2020-06, 2020).

RA 11032 necessitates that government agencies provide service for simple transactions within three days, complex transactions within seven days, and highly technical transactions or applications that may impact public health, safety, morals, and policy within 20 working days. These timeframes are defined in the respective citizens' charter of each agency. The automatic approval clause stipulates that applications meeting all requirements with duly paid fees yet to be processed within the specified timeframe will receive automatic approval.

Furthermore, the ARTA's Memorandum Circular No. 2020-06, s. Two thousand twenty highlights that the responsibility has now shifted to government agencies, and they must act on applications within the processing period specified in their citizens' charters. The presumption is that the application is considered complete and in order unless the concerned Government Agencies issue a notice of disapproval or notice requesting an extension within the specified processing time (ARTA, 2020).

Consistent with the guidelines outlined in Memorandum Circular No. 2020-06, dated 2020, government entities are expressly prohibited from engaging with applicants in any manner concerning an application or request, except during the initial assessment of the request, the evaluation of document sufficiency, and when deemed strictly necessary (ARTA, 2020). Nevertheless, the policy allows government agencies to disseminate information about applications to the public through email, websites, or hotlines. Government agencies are encouraged to establish an online processing system and payment gateway for permit, license, and clearance applications to enhance efficiency and facilitate digital payments.

The Anti-Red Tape Authority (ARTA) advocates data sharing among government agencies, in line with the Whole of Government Approach, which encourages collaboration and integration of procedures (ARTA, 2020). This approach ensures that government agencies have access to up-to-date and readily available information for effective service delivery and to respond to the changing needs of the public. Data sharing allows government agencies to exchange information, eliminating the need for duplicate document submissions (ARTA, 2020).

Information and Communications Technology (ICT) has evolved from a luxury to an individual necessity. Computers, in particular, play a vital role in managing, storing, and retrieving vast amounts of information, making it easily and quickly accessible. In working environments, ICT enables individuals



Authors retain copyright. Articles published under a Creative Commons Attribution 4.0 (CC-BY) International License. This license allows this work to be copied, distributed, remixed, transformed, and built upon for any purpose provided that appropriate attribution is given, a link is provided to the license, and changes made were indicated.

to complete numerous tasks efficiently (Carpio, 2020). Public schools have not remained untouched by the significance of ICT, and there is a growing need to modernize processes in this sector.

One of the primary challenges impeding the efficient implementation of a Citizen's Charter in public schools is the literacy level of citizens or clients. Often, stakeholders need more awareness of the services available, creating fertile ground for red tape. Schools face various obstacles, including a lack of resources, budgetary constraints, inexperienced staff, inadequate infrastructure, and a lack of commitment. While the Citizen's Charter typically includes a grievance resolution procedure, there is often no provision for compensating citizens or clients when services are not delivered on time.

The digital age, where nearly everything operates within a digital interface, calls for a paradigm shift. To address the challenges of balancing stakeholder satisfaction with the demands of development and empowerment, it is imperative to harness existing technological advancements to enhance internal efficiency and meet the needs of internal customers because this will ultimately contribute to the overall productivity of the agency.

Several Philippine government agencies have successfully implemented relevant mobile applications in their transactions. For instance, the Department of Health (DoH) employs the COVID-19 mobile application to monitor real-time data and identify bottlenecks and delays in patient treatment. The app automates tasks such as tracking testing specimens, transmitting test findings, and monitoring quarantined contacts. The iHanda project, aimed at disaster preparedness, educates Manila residents on responding to various disasters and provides access to resources for preparedness. The GO MANILA Mobile App, the official app of the City Government of Manila, streamlines access to services and offers a secure method for various payment and financial transactions.

Given that DepEd serves the most significant number of stakeholders among government agencies, there is a compelling need to develop a mobile application that enhances responsiveness in providing services to the general public.

Generally, initiation and implementation for benchmarking purposes of a Capstone Project that centers on the development of a mobile app in a broader scope in various schools and divisions in the region and the entire country, in general, will propel the advancement of DepEd's strategic direction, which paves the way towards achieving the goals of AMBISYON 2040 for the benefit of the Filipino learners.

Mary Perpetua E. Brioso National High School (MPEBNHS), as an effective arm of DepEd, expressed its commitment to helping meet performance expectations and targets, gaps, and challenges along with essential service delivery of the department. However, it could not be denied that in the delivery of basic services, there lies the salient fact that setbacks pose considerable challenges to the school's stakeholders. These include the distance of the parents from the school, which hinders them from personally making transactions such as enrolling their children, securing school forms, and whatnot; the non-presence of the school head and personnel in charge of processing requests delays transactions; and economic status of the parents prevents them from going to and fro the school since their travel entails a considerable amount of expenses from their budget especially in this time of pandemic.

A Capstone Project was developed to address the needs of the school's stakeholders, particularly during emergencies. The project, titled "Mobile-based Selected School Services Application (iSkulSerb)," encompasses distinct features, including access to the school's historical information, utilization of school services during enrollment, issuance of records, an e-library facilitating book borrowing, and the incorporation of a feedback and complaint mechanism.



Authors retain copyright. Articles published under a Creative Commons Attribution 4.0 (CC-BY) International License. This license allows this work to be copied, distributed, remixed, transformed, and built upon for any purpose provided that appropriate attribution is given, a link is provided to the license, and changes made were indicated.

The primary goal of this Capstone Project (CP) was to introduce and encourage stakeholders to practically apply the concept and Implementing Rules and Regulations (IRR) of Republic Act No. 11032, specifically at MPEBNHS, to achieve high customer satisfaction.

With the advent of modern technology, transactions were expedited, and public service delivery was enhanced to support the government's initiative to simplify processes and make services convenient for the public under RA 11032. Thus, this CP was proposed for pilot implementation.

### Research Questions

This study aimed to create the "Mobile-Based Selected School Services Application" (iSkulSerb) for Mary Perpetua E. Brioso National High School, assess its impact on stakeholders' post-pilot implementation, and advocate its adoption in other public schools in Masbate.

Specifically, the research aimed to address the following inquiries:

1. What is the level of acceptability among the stakeholders of the Mobile-Based Selected School Services Application (iSkulSerb) after its pilot implementation in Mary Perpetua E. Brioso National High School?
2. To what extent does the Mobile-Based Selected School Services Application (iSkulSerb) enhance accessibility for its stakeholders following the pilot implementation in Mary Perpetua E. Brioso National High School?
3. How user-friendly is the Mobile-Based Selected School Services Application (iSkulSerb) for its stakeholders after the pilot implementation in Mary Perpetua E. Brioso National High School?
4. How does implementing the Mobile-Based Selected School Services Application (iSkulSerb) influence the efficiency of school transactions at Mary Perpetua E. Brioso National High School (MPEBNHS)?
5. How can the demonstrated reliability and efficacy of iSkulSerb be leveraged to advocate for its adoption in other public schools within the Schools Division of Masbate Province, and what strategies are necessary for a smooth transition to broader implementation?

## RESEARCH METHODOLOGY

### Research Design

This study utilized the Research and Development (R&D) research method, following Borg and Gall's (1983) guidelines to develop and validate educational products. This method, widely utilized by education practitioners and pedagogues, involves systematic and creative work to increase knowledge and devise new applications (Gay, 1991; Cororaton, 1999). Given the development and pilot-testing of the iSkulSerb in Mary Perpetua E. Brioso National High School, the R&D method was deemed appropriate for this project. A process flow chart detailing the steps of the R&D method for developing and pilot-testing iSkulSerb was organized as shown in Figure 1.



Authors retain copyright. Articles published under a Creative Commons Attribution 4.0 (CC-BY) International License. This license allows this work to be copied, distributed, remixed, transformed, and built upon for any purpose provided that appropriate attribution is given, a link is provided to the license, and changes made were indicated.

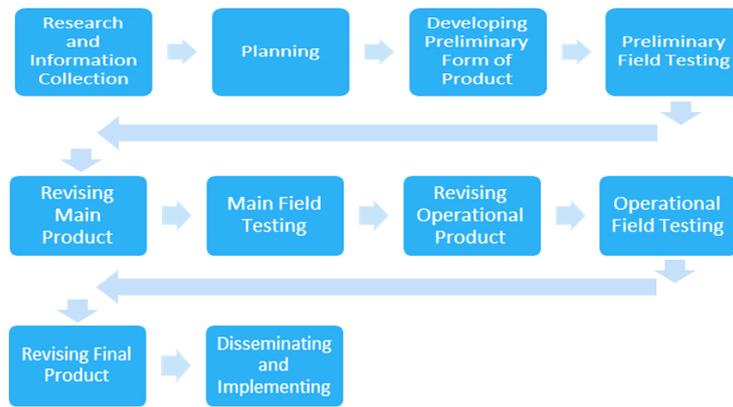


Figure 1. R&D Method Steps by Borg & Gall (Gustiani, 2019)

In addition to the R&D method, this study employed the descriptive survey method. Descriptive research entails gathering data to address inquiries regarding the present state or condition of the subject (Gay, 1992). To evaluate the impact of the iSkulSerb mobile application, the researcher employed the documentary analysis technique with a questionnaire as the primary data-gathering instrument. Education partners were identified using convenient sampling.

### Research Respondents

The iSkulSerb mobile application was utilized by parents and learners at Mary Perpetua E. Brioso National High School, aiming to enhance efficiency in school transactions. The evaluation focused on stakeholders who used the app within three months (August to October 2021) after its implementation. Seventy-five school service respondents participated in the survey using accidental sampling methods (Mamo, 2018). Clients who transacted business with selected services via iSkulSerb were interviewed based on their availability and willingness to participate.

During data collection, clients were informed of the study's purpose, their right to decline participation, and the confidentiality of their responses.

### Research Instrument

The survey questionnaire, divided into two parts, assessed respondents' background and service evaluation. Part I collected demographic information, including age, sex, educational achievement, and client type. Part II focused on service assessment, where respondents rated services offered through iSkulSerb on a 5-point scale, ranging from 1 (Insignificant Impact) to 5 (Significant Impact). The instrument underwent rigorous expert content validation and was pre-tested with 20 respondents at another school. Cronbach's Alpha was employed to assess internal consistency.

### Data Analysis

The quantitative data from survey questionnaire responses were analyzed using descriptive statistics and tables. Percentages, weighted mean, and rank order were used to present the findings. The following statistical tools were employed to measure the effects of using the iSkulSerb to analyze and interpret the data gathered from a quantitative perspective.



**a. Percentage**

The tool was used to interpret the user’s level of usability of the mobile application using the following formula:

$$Percentage = \frac{\text{sample of responses}}{\text{total number of responses}} \times 100\%$$

**b. Weighted Mean**

This was used to compare respondents’ feedback and determine the rank of each indicator as to the mobile application’s usability level. The formula for the weighted mean is:

$$Mn = \Sigma fx = f_1x_1 + f_2x_2 + f_3x_3 \dots + f_nx_n$$

$$Mn = \Sigma f = f_1 + f_2 + f_3 \dots + f_n$$

Where: Mn = Weighted Mean

Σfx = Summation of the Product

Σf = Total Number of Frequencies

To determine the effects of the iSkulSerb, which the respondents would claim, the weighted mean would then be computed using the following scales, as presented in Table 1:

**Table 1. Likert Scale in Determining the Effects of iSkulSerb**

Scale	Numerical Rating
Significant Impact	5
Moderate Impact	4
Minimal Impact	3
Minor Impact	2
Insignificant Impact	1

To facilitate the interpretation of data, the following range was set to determine the classification of the responses for Acceptability, Accessibility, and User-Friendliness, as shown in Table 2:

**Table 2. Likert Scale in Determining the Acceptability, Accessibility, and User-Friendliness of iSkulSerb**

Scale	Numerical Rating
Significant Impact	4.21 – 5.00
Moderate Impact	3.41 – 4.20
Minimal Impact	2.61 – 3.40
Minor Impact	1.81 – 2.60
Insignificant Impact	1.00 – 1.80

To analyze the data in the questionnaire, the weighted mean would then be computed using the following scales, as indicated in Table 3:

**Table 3. Likert Scale in Interpreting the Data**

Range/ Weighted Mean	Adjectival Description	Interpretations
Significant Impact	5	There are significant changes in the school's services, and clients are satisfied with these services.



Authors retain copyright. Articles published under a Creative Commons Attribution 4.0 (CC-BY) International License. This license allows this work to be copied, distributed, remixed, transformed, and built upon for any purpose provided that appropriate attribution is given, a link is provided to the license, and changes made were indicated.

Moderate Impact	4	Significant changes in the school's services exist, and clients are slightly satisfied with these services.
Minimal Impact	3	There are significant changes in the school's services, and clients are not satisfied with these services.
Minor Impact	2	There are insignificant changes in the school's services, and clients are slightly satisfied with these services.
Insignificant Impact	1	There are insignificant changes in the school's services, and clients are not satisfied with these services.

## RESULTS AND DISCUSSION

Following the Capstone Project (CP) implementation, this part discusses how the project objectives were achieved, the actual outputs produced, and the intermediate outcomes attained during the project's implementation. It elucidates how the research design and collected data were utilized in the CP's practical phase. Additionally, it delves into the challenges encountered during the implementation, the strategies employed to overcome them, the hazards that arose, and how they were successfully mitigated.

Survey questionnaires were disseminated to school stakeholders to assess the impact of the iSkulSerb's features on them and their need for technical assistance during the Capstone Project's implementation. Teachers emphasized the necessity for improved internet connectivity, additional laptops, and a printer, all essential for fully implementing the Capstone Project. Teachers also stressed continuous enhancements to the mobile application to enhance user-friendliness and the need for ongoing technical support to maximize its utilization.

### Acceptability

Table 4 presents the level of impact regarding the acceptability of iSkulSerb, as perceived by 75 respondents, including parents, teachers, and learners.

**Table 4. Level of Impact Regarding Acceptability of iSkulSerb as Perceived by the Respondents**

Indicators	$\Sigma f$	$\Sigma fx$	Mn
	Total Frequency	Summation of Products	Weighted Mean
1. iSkulSerb allowed me to recover quickly and easily whenever I made a mistake.	75	310	4.13
2. iSkulSerb gave me a convenient way to access selected school services.	75	319	4.25
3. iSkulSerb acknowledged and promptly informed me about the progress of my action.	75	324	4.32
4. When switching between screens, the navigation was consistent.	75	335	4.47
5. I could use iSkulSerb 's functions because of its interface.	75	325	4.33
6. iSkulSerb offers all of the features and capabilities I seek.	75	339	4.52
<b>Total</b>	<b>450</b>	<b>1952</b>	<b>4.34</b>



Authors retain copyright. Articles published under a Creative Commons Attribution 4.0 (CC-BY) International License. This license allows this work to be copied, distributed, remixed, transformed, and built upon for any purpose provided that appropriate attribution is given, a link is provided to the license, and changes made were indicated.

The weighted mean for "iSkulSerb allowed me to recover quickly and easily whenever I made a mistake" is 4.13, signifying a moderate impact. For "iSkulSerb provided me a convenient way to access selected school services," the weighted mean is 4.25, indicating a moderate impact. The weighted mean for "iSkulSerb acknowledged and informed me about the progress of my action promptly" is 4.32, also with an average impact. Conversely, for "when switching between screens, the navigation was consistent," the weighted mean is 4.47, signifying a moderate impact. "I could use all of iSkulSerb's functions because of its interface" has a weighted mean of 4.33, indicating a moderate impact, and for "iSkulSerb offers all the features and capabilities I seek," the weighted mean is 4.52, showing a significant impact. Overall, under acceptability, the weighted mean is 4.34, suggesting that the mobile application had a moderate impact regarding acceptability.

Stakeholders mentioned during interviews that the turnaround time for services provided by the school had significantly improved, as they no longer needed to visit the school in person to process their requests. After applying for a transaction through the mobile application, the server or administrator initiates the process immediately. However, some challenges affecting the acceptability of the mobile application, such as clients' proficiency in using mobile applications on their devices and the cost of mobile data, were mentioned in the focus group discussion (FGD). In some cases, the mobile data was more affordable than the transportation expenses required for an in-person visit to the school. These findings align with stakeholders' perceptions, indicating that the mobile application's impact on acceptability is moderate.

### Accessibility

The level of impact regarding accessibility of iSkulSerb, as perceived by the respondents, is presented in Table 5.

**Table 5. Level of Impact Regarding Accessibility of iSkulSerb as Perceived by the Respondents**

Indicators	$\Sigma f$	$\Sigma fx$	Mn
	Total Frequency	Summation of Products	Weighted Mean
1. The iSkulSerb was simple to use.	75	317	4.23
2. Learning to utilize iSkulSerb was easy for me.	75	323	4.31
3. I appreciate the iSkulSerb's interface.	75	322	4.29
4. The information in the iSkulSerb was orderly, so I could find the information I wanted quickly.	75	350	4.67
5. Using iSkulSerb in social settings is comfortable.	75	329	4.39
6. The time required to use iSkulSerb was appropriate for me.	75	328	4.37
7. I would use iSkulSerb again.	75	325	4.33
8. Overall, I am satisfied with iSkulSerb.	75	325	4.33
<b>Total</b>	<b>600</b>	<b>2619</b>	<b>4.37</b>

The weighted mean for "the iSkulSerb was simple to use" is 4.23, indicating a moderate impact. For "learning to utilize iSkulSerb was easy for me," the weighted mean is 4.31, signifying a moderate impact, and for "I appreciate the iSkulSerb's interface," the weighted mean is 4.29, with an average impact. The weighted mean for "the information in the iSkulSerb was orderly, so I could find the information I wanted quickly" is 4.67, indicating a significant impact. For "using iSkulSerb in social settings is comfortable,"



Authors retain copyright. Articles published under a Creative Commons Attribution 4.0 (CC-BY) International License. This license allows this work to be copied, distributed, remixed, transformed, and built upon for any purpose provided that appropriate attribution is given, a link is provided to the license, and changes made were indicated.

the weighted mean is 4.39, signifying a moderate impact, and for "the amount of time required to use iSkulSerb was appropriate for me," the weighted mean is 4.37, also with an average impact. The weighted mean for both "I would use iSkulSerb again" and "overall, I am satisfied with iSkulSerb" is 4.33, signifying a moderate impact. The overall weighted mean for accessibility is 4.37. The respondents perceived that the mobile application had a moderate impact regarding accessibility. Regarding accessibility, respondents noted in interviews and the FGD that the strength of the network signal in their area and the cost of purchasing mobile data influenced the application's effectiveness. Therefore, the impact on accessibility was considered moderate.

### User-Friendliness

Table 6 provides an overview of the level of impact regarding the user-friendliness of iSkulSerb, as perceived by 75 respondents.

**Table 6. Level of Impact Regarding User-Friendliness of iSkulSerb as Perceived by the Respondents**

Indicators	$\Sigma f$	$\Sigma fx$	Mn
	Total Frequency	Summation of Products	Weighted Mean
1. iSkulSerb would be beneficial for accessing the selected services of the school.	75	315	4.20
2. iSkulSerb made it easier for me to access selected school services.	75	320	4.27
3. iSkulSerb made it easy for me to communicate with school personnel.	75	329	4.39
4. I had many opportunities to engage with school personnel using iSkulSerb.	75	319	4.25
5. I was confident that whatever information I submitted through iSkulSerb would be received by the school personnel.	75	325	4.33
6. Using iSkulSerb, I felt at ease speaking with school personnel.	75	313	4.17
Total	450	1921	4.27

The weighted mean for "iSkulSerb would be beneficial for accessing the selected school services" is 4.20, indicating a moderate impact. For "iSkulSerb made it easier for me to access selected school services," the weighted mean is 4.27, signifying a moderate impact. The weighted mean for "iSkulSerb made it easy for me to communicate with school personnel" is 4.39, indicating a moderate impact. On the other hand, for "I had a lot more opportunity to engage with school personnel when I started using iSkulSerb," the weighted mean is 4.25, signifying a moderate impact. For "I was confident that whatever information I submitted through iSkulSerb would be received by the school personnel," the weighted mean is 4.33, indicating a moderate impact, and for "using iSkulSerb, I felt at ease speaking with school personnel," the weighted mean is 4.17, signifying a significant impact. Under user-friendliness, the overall weighted mean is 4.27. The respondents perceived that the mobile application had a moderate effect on user-friendliness.

Based on the results of interviews and the FGD, the respondents indicated that the mobile application is user-friendly. However, challenges arose due to some users' need for more proficiency in using the application, variations in network signal strength, and the cost of purchasing mobile data. Nevertheless,



Authors retain copyright. Articles published under a Creative Commons Attribution 4.0 (CC-BY) International License. This license allows this work to be copied, distributed, remixed, transformed, and built upon for any purpose provided that appropriate attribution is given, a link is provided to the license, and changes made were indicated.

the respondents expressed high satisfaction regarding efficiency in providing services to clients. In sum, the moderate impact regarding user-friendliness is justifiable.

### **Impact on the Efficiency of School Transactions**

Implementing the Mobile-Based Selected School Services Application (iSkulSerb) significantly impacts the efficiency of school transactions at Mary Perpetua E. Brioso National High School (MPEBNHS).

The introduction of the Mobile-Based Selected School Services Application (iSkulSerb) at Mary Perpetua E. Brioso National High School (MPEBNHS) has ushered in a wave of efficiency and convenience in school transactions. By streamlining various processes, stakeholders have found a new level of ease in their interactions with the school. These streamlined processes encompass various school-related tasks, from accessing school profiles to enrollment, record issuances, borrowing books, handling public affairs, and providing a structured feedback and complaints mechanism. This transformation is remarkable because these processes can now be completed electronically, eliminating the need for physical visits to the school and the burdensome paperwork that once accompanied them.

This electronic transformation is expected to result in faster turnaround times when dealing with the school. Transactions are now processed with incredible speed and efficiency. Requests can be submitted, and responses received promptly, ensuring that tasks are completed without the unnecessary delays that were once commonplace.

Enhancing this efficiency is iSkulSerb's accessibility features, which include a well-organized information layout and a user-friendly interface. These features facilitate easy navigation and quick retrieval of desired information, further contributing to the efficiency of transactions. Stakeholders can now find the necessary information with minimal effort, streamlining their interactions with the school.

The introduction of iSkulSerb also leads to a reduction in administrative overhead for school personnel. Automation of various administrative tasks frees staff time and resources. This newfound efficiency allows school staff to focus on more critical tasks rather than getting bogged down in routine paperwork and data management.

Another significant benefit is the improved communication between stakeholders and school personnel. iSkulSerb enables efficient, real-time communication, providing stakeholders with updates and information sharing. Streamlining the transaction process fosters a more productive and transparent relationship between stakeholders and the school.

Moreover, implementing iSkulSerb offers the potential for cost savings for the school and its stakeholders. For instance, stakeholders can save on transportation costs associated with in-person visits to the school. Simultaneously, the school can reduce expenses related to printing documents and materials as many processes transition to a paperless format.

With efficiency comes stakeholder satisfaction and engagement. The increased speed and convenience of school transactions positively impact stakeholder satisfaction. When tasks are completed swiftly and conveniently, stakeholders are more likely to engage with the school's services and participate in its activities.

Finally, the introduction of iSkulSerb ensures data accuracy and effective record-keeping. Accurate and organized records reduce errors and maintain data integrity, ensuring that information is readily available when needed.



Authors retain copyright. Articles published under a Creative Commons Attribution 4.0 (CC-BY) International License. This license allows this work to be copied, distributed, remixed, transformed, and built upon for any purpose provided that appropriate attribution is given, a link is provided to the license, and changes made were indicated.

In a nutshell, iSkulSerb's implementation at MPEBNHS has significantly enhanced the efficiency of school transactions by streamlining processes, reducing turnaround times, improving accessibility, and promoting effective communication. This transformation benefits the school and enhances the overall experience for stakeholders, making school services more efficient and user-friendly. The positive impact of technology in education is evident in the results.

### **Sustainability Plan**

In summary, the Capstone Project has simplified processes, made services more convenient to school stakeholders, and aligned with government initiatives to streamline public services and improve accessibility and reliability. The project's success establishes it as a model for service applications in public schools, contributing to the government's goal of providing efficient, speedy, and accessible government services. It revolutionizes the functions of public schools, ensuring transparency and strengthening the relationship between schools and stakeholders, ultimately benefiting the community.

For the Capstone Project (CP) to contribute to the body of knowledge in sustainable development within the field of education, particularly in expediting various transactions and streamlining processes to enhance public service convenience, the CP must be replicated, benchmarked, and comprehensively sustained within the public school system. To achieve this fundamental objective, the scholar or proponent of the CP has employed a series of sustainability elements, each with a distinct focus.

Recognizing the pivotal role that a strategic vision plays in realizing any significant undertaking, the scholar or proponent endeavors to present a comprehensive vision and mission for the CP to the key stakeholders. This includes the Schools Division Superintendent (SDS), the Institutional Partner, Assistant Schools Division Superintendents (ASDSs), supervisors, and school heads. This presentation occurs during the Quarterly Management Committee Meeting of the SDO Masbate Province. By sharing these essential aspects of the CP, the project's co-owners will gain a clear sense of purpose and direction to ensure the sustained success of the project.

The scholar or proponent strongly emphasizes the significance of monitoring the CP's implementation and impact. Monitoring is an essential component for the CP to endure. This involves establishing quantifiable outcomes and implementing systems to monitor and evaluate the performance of schools implementing and replicating the CP. The project's co-owners are well-positioned to define these quantifiable outcomes and implement methods for tracking performance using industry-standard monitoring technologies. Furthermore, monthly monitoring of schools utilizing the mobile application can be conducted, employing the standard monitoring tools designed by the Quality Assurance Division (QAD).

Another pivotal element contributing to the sustained implementation of the CP in schools is the ability to adapt and make necessary course corrections. This includes identifying strategies considering the evolving demands and decisions of the project and its stakeholders. Implementers should establish methods for integrating these demands and decisions to keep pace with the latest trends in online transactions.

Sustaining the implementation of any project necessitates comprehensive assistance from external support systems. The scholar or proponent of the CP advocates the participatory approach, primarily focusing on generating support from the wider community. Implementing schools should explore all avenues to enlist the broader community's support to ensure the implementation's success. Therefore, implementers must broaden their support network, significantly advancing the attainment of the CP's objectives. This involves involving community members in the planning and execution process,



Authors retain copyright. Articles published under a Creative Commons Attribution 4.0 (CC-BY) International License. This license allows this work to be copied, distributed, remixed, transformed, and built upon for any purpose provided that appropriate attribution is given, a link is provided to the license, and changes made were indicated.

enhancing parents' and learners' involvement, and establishing partnerships with private institutions and civic organizations to seek support for project implementation.

Integrating the proven and tested positive outcomes of the CP's implementation into the current system is a crucial strategy for sustaining the project. The scholar or proponent advances the idea of supporting project implementation by incorporating the CP's additional upgraded features with the existing systems in the educational sector. This integration aims to improve essential service delivery to seamlessly meet stakeholder preferences and requirements.

The role of all staff members and implementers in pursuing project sustainability must be considered. Therefore, investing in staff learning and development is paramount, as these individuals are the driving force behind sustaining the CP within their respective schools. Conducting capacity-building training among the CP's staff-implementers is vital, as it enhances their technical expertise in project implementation.

To ensure the practical sustainability of the CP, implementing schools must establish strong partnerships with local government units (LGUs) at the local level. Over the years, LGUs have consistently supported schools in realizing various programs, projects, and activities related to governance, access, and quality. These partnerships include regular coordination with the Provincial Governor, Municipal Mayors, members of Sangguniang Panlalawigan, and Sangguniang Bayan of the Province of Masbate. This collaboration fosters a collaborative and responsible attitude among current and future stakeholders. Additionally, it is vital to present the CP to all Municipal Mayors in their assembly to seek sponsorship of cell phones or tablets through the Association of School Principals (ASP) of the Department of Education. Providing advocacy materials to all municipalities and securing continuous support from LGUs through signing a Memorandum of Agreement (MOA) further strengthens the CP's sustainability.

By meticulously addressing these sustainability elements, we pave the way for the continued success and expansion of the CP, benefiting the broader community and advancing the cause of accessible and efficient public service delivery in education.

## CONCLUSION

In this study, we set out to address several critical questions regarding the acceptability, accessibility, user-friendliness, efficiency, and potential for broader implementation of the Mobile-Based Selected School Services Application (iSkulSerb) at Mary Perpetua E. Brioso National High School (MPEBNHS). The research findings and discussions provide valuable insights into the impact of iSkulSerb on school transactions and its potential to revolutionize the delivery of educational services in the context of our research questions.

The level of acceptability among our stakeholders, including parents, teachers, and learners, demonstrates that iSkulSerb is indeed a welcome addition to our educational ecosystem. The application's capacity to acknowledge and inform stakeholders on time, its user-friendly interface, and its ability to provide a convenient way to access selected school services have all contributed to a moderate to significant impact on stakeholder acceptability. This level of satisfaction not only indicates iSkulSerb's potential but also highlights technology in enhancing stakeholder engagement and service delivery.



Authors retain copyright. Articles published under a Creative Commons Attribution 4.0 (CC-BY) International License. This license allows this work to be copied, distributed, remixed, transformed, and built upon for any purpose provided that appropriate attribution is given, a link is provided to the license, and changes made were indicated.

iSkulSerb has also significantly improved accessibility for our stakeholders. Stakeholders have found the application straightforward and appreciate its well-organized information layout. While there are challenges related to network strength and the cost of mobile data, stakeholders' moderate satisfaction suggests that these issues can be addressed with strategic interventions. The application's ability to reduce administrative overhead, streamline processes, and offer efficient communication has, in turn, resulted in faster and more accessible school transactions.

The moderate impact of iSkulSerb's user-friendliness underscores the need for continued user education and support. Stakeholders have acknowledged the application's potential for enhancing their interactions with school personnel. The users' suggestion of orientation workshops and partnerships with telecommunication companies and local government units is a testament to their proactive engagement and a step toward maximizing iSkulSerb's benefits.

A significant finding of this study is the impact of iSkulSerb on the efficiency of school transactions. Streamlined processes, reduced turnaround times, and improved efficiency can result in cost savings for the school and its stakeholders. Moreover, the application's positive influence on transparency, accessibility, and public service delivery aligns with the government's objective of providing efficient, speedy, and inexpensive government services.

The demonstrated reliability and efficacy of iSkulSerb are not confined to MPEBNHS alone. This technology can transform how public schools deliver services effectively and efficiently to their communities. Adopting iSkulSerb in other public schools within the Schools Division of Masbate Province is feasible and essential. To facilitate a smooth transition, following the sustainability plan outlined in this study is crucial, encompassing vision, monitoring and evaluation, adaptation, community support, integration, staff development, and political support.

In conclusion, the iSkulSerb project represents a significant step towards improving responsiveness to stakeholders in the education sector. Its impact on acceptability, accessibility, user-friendliness, efficiency, and potential for broader implementation is evident. As we move forward, we must continue to engage with our stakeholders, address their concerns, and work collaboratively to ensure the sustained success and expansion of iSkulSerb. The lessons gleaned from this project can serve as a model for other public schools aiming to enhance their service delivery and stakeholder engagement.

The author extends profound appreciation to the Development Academy of the Philippines (DAP) for the invaluable support through the prestigious scholarship for the Public Management Development Program (PMDP) – Middle Management Class (MMC). Gratitude is also extended to the Department of Education (DepEd) for its essential role in providing technical and administrative guidance and facilitating access to the agency's rich resources, significantly contributing to the success of the Capstone Project. A special note of thanks is reserved for the internal and external stakeholders of Mary Perpetua E. Briosos National High School, whose generous financial assistance played a pivotal role in the development and realization of the Capstone Project.



## REFERENCES

- 7th Congress. (2017). Republic Act 11032: Ease of Doing Business and Efficient Government Service Delivery Act of 2018. <https://www.officialgazette.gov.ph/downloads/2018/05may/20180528-RA-11032-RRD.pdf>
- Akinyele, J. A., Reiter, M. K., & Krenn, S. (2011). Self-Protecting Electronic Medical Records on Mobile Devices. *International Journal of Information Security*, 10(1), 47-60.
- Anti-Red Tape Authority. (2020). Anti-Red Tape Authority (ARTA) Memorandum Circular No. 2020 - 06, s. 2020. <https://www.arta.gov.ph/pdf/arta-mc-2020-06.pdf>
- Borg, W. R., & Gall, M. D. (1983). Educational research: An introduction. Longman.
- Carpio, C. (2020). The Role of ICT in Organizing, Storing, and Retrieving Information. In Information and Communication Technology and Society (pp. 21-34). *IGI Global*. <https://www.igi-global.com/chapter/the-role-of-ict-in-organizing-storing-and-retrieving-information/233944>
- Cernvall, M., Peterson, U., Jasson, S., Wetterhall, A., & Nordin, S. (2018). The Impact of the PTSD Coach Mobile Application on PTSD Symptoms: A Randomized Controlled Trial. *Journal of Traumatic Stress*, 31(6), 856-861.
- Contact Center ng Bayan. (2019). Citizen's Charter. [http://www.contactcenterngbayan.gov.ph/good\\_practices/citizens-charter/](http://www.contactcenterngbayan.gov.ph/good_practices/citizens-charter/)
- Contact Center ng Bayan. (2019). Republic Act No. 11032, Ease of Doing Business and Efficient Government Service Delivery Act of 2018. <https://contactcenterngbayan.gov.ph/eodb>
- Cororaton, A. A. (1999). Research and development (R&D). In M. M. Mangonon & A. C. Cammayo (Eds.), *Research for better education* (p. 9). Rex Bookstore, Inc.
- Department of Education. (n.d.). DepEd Mandate. <https://www.deped.gov.ph/about-deped/overview/>
- Department of Education. (2001). Vision, Mission, Core Values. <https://www.deped.gov.ph/about-deped/vision-mission/>
- DepEd Order No. 8, s. 2015. (2015). Policy Guidelines on Classroom Assessment for the K to 12 Basic Education Program. Department of Education, Republic of the Philippines.
- Department of Education. (2016). Department Order No. 54, s. 2016. Guidelines on the Request and Transfer of Learner's School Records. Pasig City.
- Department of Education. (2017). Department Order No. 48, s. 2017. Policy and Procedural Guidelines on the Certification, Authentication, and Verification of Basic Education School Records. Pasig City.
- Department of Education. (2020). The Basic Education Sector: The Road to Recovery. <https://www.deped.gov.ph/2019/11/19/education-sector-the-road-to-recovery/>



- Executive Order No. 2, s. 2016. (2016). Operationalizing in the Executive Branch the People's Constitutional Right to Information and the State Policies of Full Public Disclosure and Transparency in the Public Service and Providing Guidelines Therefor. Office of the President, Republic of the Philippines.
- Fernando, R. S., et al. (2019). Mobile Applications and Disaster Preparedness of Manila Residents: A Nexus Towards the Achievement of Local Governance Goals. *In Proceeding of the 6th Bandung Creative Movement International Conference (BCMIC 2019)* (pp. 264-269). Atlantis Press.
- Frohberg, D., Goth, C., & Schwabe, G. (2009). Mobile Learning Projects - a Critical Analysis of the State of the Art. *Journal of Computer Assisted Learning*, 25(4), 307-331.
- Ganapati, S. (2015). Building Mobile Government. In *Mobile Applications Development* (pp. 147-155). Springer.
- Gay, L. R. (1991). Educational research: Competencies for analysis and application. Prentice Hall.
- Government of the Philippines. (2019). Republic Act 11032: Ease of Doing Business and Efficient Government Service Delivery Act of 2018. <https://www.officialgazette.gov.ph/downloads/2018/05may/20180528-RA-11032-RRD.pdf>
- Hussain, A., Pereira, R., Sarwar, S., Jürgensen, N., & Apatira, A. (2017). Usability Evaluation of Lazada Mobile Application. *Procedia Manufacturing*, 11, 330-337.
- Hwang, G. J., & Tsai, C. C. (2011). Research Trends in Mobile and Ubiquitous Learning: A Review of Publications in Selected Journals from 2001 to 2010. *British Journal of Educational Technology*, 42(4), E65-E70.
- Khalid, H., Shihab, E., Nagappan, M., & Hassan, A. E. (2014). What Do Mobile App Users Complain About? *IEEE Software*, 31(3), 70-77.
- Khelifi, A., Hwang, L. H., Lin, C. C., & Djan, S. (2013). Mobile Application for the Safety on Roads (MASAR). *Procedia Computer Science*, 26, 141-147.
- Klimova, B., & Sanda, M. (2021). Mobile Application for Teaching English as a Second Language: Usability Testing and Interaction Analysis. *Universal Access in the Information Society*, 20(2), 225-241.
- Llanto, F. M., Hernandez, M. R., Hongo, N. M., & Sajona, B. G. (2018). The Significance of CARD Bank's Mobile Banking Application in Financial Inclusion and Development: The Case of Konek2CARD Mobile Application. *Annals of Leisure Research*, 21(5), 555-576.
- Mamo, A. (2018). Accidental or convenience sampling. In N. M. Ashenafi (Ed.), *Research Methods in Social Sciences: Qualitative and Quantitative Approaches* (p. 151). African Books Collective.



- Nayra, M. D. (2019). ISO 9001:2005 Quality Management System Certification Program for GQMP Beneficiaries. Development Academy of the Philippines. <http://dap.edu.ph/wp-content/uploads/2018/04/MC-2018-1-2.pdf>
- Nayra, M. D. (2021). Transformational Journey towards Service Excellence. Development Academy of the Philippines. <http://www.nap.pia.gov.ph/attachments/075983.pdf>
- Newcombe, E. (2014). State government CIOs are focusing on infrastructure and mobile apps. Government Technology. <http://www.govtech.com/applications/State-Government-CIOs-Focusing-on-Infrastructure-Mobile-Apps.html>
- Nunes, I. L., & Simões-Marques, M. (2015). Evaluation of the Impact of the Adoption of Mobile Technology. *Procedia Computer Science*, 67, 199-207.
- The Philippines. (1987). 1987 Philippine Constitution. <https://www.officialgazette.gov.ph/constitutions/1987-constitution/>
- Ridad, C. A., Anacay, J. J., & Acabal, R. T. (2017). An Android Application for Immunization Record Management and Health Promotion. *International Journal of Advanced Computer Science and Applications*, 8(5), 101-107.
- Schmitz, C., Veit, D., & Osterloh, M. (2016). Mobile Service Usage and Firm Performance: A Multilevel Exploration of Benefits and Risks. *Journal of Management Information Systems*, 33(1), 134-169.
- Spits, P., Harco, L. N. T., & Herawati, D. (2020). A Smart Mobile Application for Public Transportation Using Android. *IOP Conference Series: Materials Science and Engineering*, 935(1), 012115.
- Williams, L. (2015). State and Local Government CIOs Prioritize Mobile App Development. StateTech Magazine. <https://statetechmagazine.com/article/2015/11/state-local-government-cios-prioritize-mobile-app-development>
- Wong, L. H., & Looi, C. K. (2011). What Blended Support Can Mobile Learning Offer to Self-Regulated Learning? A Review of Studies. *New Review of Hypermedia and Multimedia*, 17(3), 151-161.
- Xu, C., Zhang, S., Li, Z., Lu, Y., & Huang, L. (2015). Mobile App Recommendation with Security and Privacy Awareness. *ACM Transactions on the Web*, 9(2), 10.

