


Design of a Web-Based School Profile at Northern Green School Medan Using the Importance Performance Analysis Method

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Article Info	ABSTRACT
<p>Keywords: School Profile Website, Importance Performance Analysis Method, Northern Green School, Elementary School Web Design.</p>	<p>School profile website in today's education world is very important, to convey information and school identity to the public. Currently, SD Northern Green School Medan does not have one that can function as a means of promotion that presents various important information such as school name, location, vision and mission, student achievements, gallery, and contacts that can be reached by parents and the public who want to register their children at SD Northern Green School Medan. This study aims to design a web-based school profile that is able to meet the information needs of users. The method applied in this study is the Importance Performance Analysis (IPA) Method, which helps in identifying the required attributes and evaluating their performance from the user's perspective. Data were obtained through direct observation and distributing questionnaires to 50 respondents. The results of the analysis using the Importance Performance Analysis (IPA) method show that elements such as school profile, achievements, activity gallery, and contact information are important parts that must be on the SD Northern Green School Medan website. This website was developed using HTML, PHP, and MySQL. With the presence of this website, it is hoped that the school will be able to be more effective in conveying information and improving the reputation of SD Northern Green School Medan in the current digital era.</p>
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INTRODUCTION

The current development of information technology has brought significant changes in various fields, including the education sector. The use of technology not only aids the teaching and learning process but also serves as a strategic tool for conveying information and promoting educational institutions. In the digital era, schools that utilize internet-based media will have a broader reach and a more professional image in the eyes of the public. The use of information technology in education is currently clearly visible through school marketing.

The development of information technology has significantly impacted the world of education, and without such support, educational institutions will lag behind others. One important way is through digital marketing of schools. This allows the public to access school profiles online without having to visit in person, thus enabling information to reach a wider audience. Northern Green School, Medan, is known for its beautiful environment, complete

facilities, and quality teaching. However, the school's promotion still relies heavily on social media, resulting in unstructured information and less appealing to prospective parents. This highlights the need for a school profile website that includes comprehensive information such as its vision, mission, academic achievements, a gallery of activities, and easily accessible contact information.

Web-based school profiles serve not only as a medium for information but also as a public image and identity for educational institutions. Previous research, such as that conducted by Rizkiah Tri Mukti Harahap (2021) and Priagus et al. (2019), has shown that the Importance Performance Analysis (IPA) method is effective for measuring service quality based on attributes deemed important by users. However, the application of this method to the development of web-based school profiles for elementary schools, particularly in Medan, has yet to be found. This research gap forms the basis of this study.

Based on these issues, this study formulated two main focuses: (1) designing a web-based school profile as a promotional medium for Northern Green School Medan Elementary School using the IPA method, and (2) applying the IPA method to ensure the developed features meet user needs and expectations. This research is important because the results are expected to help schools convey information more effectively, expand promotional reach, and increase competitiveness in the digital era. The contribution provided is a structured, interactive school profile website design that has been evaluated using the IPA method so that it can be used as a reference in developing similar information systems in the future.

METHODS

This study uses the Importance Performance Analysis (IPA) method as an approach to analyzing the needs and level of user satisfaction with the web-based school profile system to be designed. The science method is chosen because it can map the extent to which system attributes are considered important by the user and how the system performance of these attributes, making it easier to determine priority improvement and development.

1. Research Approach

The approach used is quantitative descriptive, because this method is suitable to describe the factual conditions that exist based on data obtained from respondents. Quantitative descriptive research also allows numerical data processing to be analyzed statistically, so that the results obtained are more objective. Data was collected through the distribution of questionnaires to respondents consisting of parents of students, and teachers.

2. Data Collection Techniques

- a. Observation - done by directly observing the school environment, facilities, and promotional media used, as well as identifying the information needed on the school profile website.
- b. Interview - conducted with school management, including school principals and administrative staff, to get a general picture of the system needs, development objectives, and obstacles encountered in school promotion.

- c. Questionnaire-distributed to respondents to assess the level of importance and performance of features that are expected to be on the school profile website.
3. Data Analysis Techniques
The questionnaire data were analyzed using the Importance Performance Analysis (IPA) method with the following steps:
 - a. Calculate the average value for the level of importance (importance) and the level of performance (performance) of each attribute:
$$\bar{X} = \frac{\sum_{i=1}^n X_i}{n} \quad ; \quad \bar{Y} = \frac{\sum_{i=1}^n Y_i}{n}$$
Where \bar{X} is the average level of importance, \bar{Y} is the average level of performance, and n is the number of respondents.
 - b. Calculate the average value in a Cartesian diagram, which is divided into four quadrants.
 - Quadrant I: Main focus (High Importance – Low Performance)
 - Quadrant II: Maintain performance (High Importance – High Performance)
 - Quadrant III: Low priority (Low Importance – Low Performance)
 - Quadrant IV: Excess resources (Low Importance – High Performance)
 - c. Determine system development priorities based on attribute positions in the quadrants.
4. System Design
System design is carried out based on the results of the IPA analysis and uses a web-based system development approach with the following stages:
 - a. Needs analysis based on the results of the IPA questionnaire
 - b. Interface design (UI/UX) referring to user needs (user-centered design).
 - c. Database design using MySQL or similar.
 - d. Web development: Using HTML, CSS, JavaScript, and PHP or an appropriate framework.
 - e. System testing: Conducted using the black-box testing method to ensure all features function properly.
5. Population and Sample
The population in this study comprised all stakeholders at Northern Green Elementary School, Medan, including teachers and parents. The sampling technique used was total sampling with 50 respondents (based on field data), ensuring the inclusion of all relevant members of the population to obtain representative data.

RESULTS AND DISCUSSION

Analysis is an activity carried out to examine or explore an event using data in order to understand the actual conditions. Analysis activities usually occur in the context of research or data processing. It is hoped that the results of this analysis can help improve understanding and support decision making. Analysis is divided into: Current System Analysis, Currently, Northern Green School Medan Elementary School does not have a website to convey information about the school. Current promotions are only carried out through social media,

which is less structured and cannot present comprehensive information, such as the school's vision and mission, gallery, or achievements systematically. Proposed System Analysis, To overcome this problem, an information system in the form of a school profile website was designed. The purpose of this website is to provide important information about the school to the public in a complete, attractive, and easily accessible manner. This website will contain content such as: Home, profile, academic achievements, gallery, and contact. Use Case Diagram, System design is carried out using a use case diagram that describes the interaction between users (admins and visitors) with various functions within the website. Some examples of use cases include: Analysis is an activity to examine or investigate an event through data to find out the actual situation. Analysis is typically conducted in the context of research or data processing. The results are expected to help improve understanding and inform decision-making. Analysis is divided into:

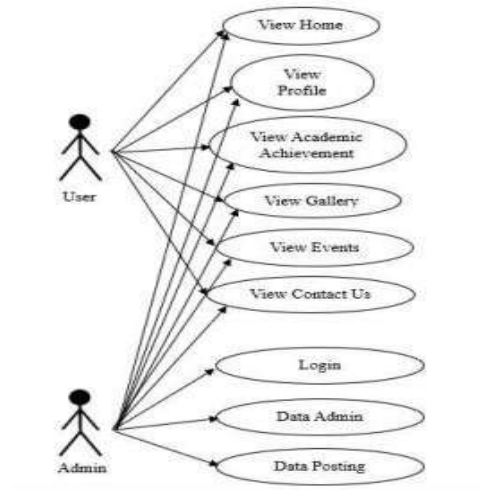


Figure 1. Use Case Diagram

The following is an explanation of each use case in Figure 1, including:

1. View Home: Displays the front page of the school website.
 2. View Profile: Displays the school's history, address, vision, and mission.
 3. View Academic Achievement: Displays student achievements at national and international levels.
 4. View Gallery: Displays school photos, including photos of buildings, classrooms, fields, gardens, bathrooms, parking lots, etc.
 5. View Contact Us: Displays the school's contact information and email address for those wishing to register at Northern Green School.
 6. Login: Accesses the website, which can only be accessed by the admin.
 7. Admin Data: Enters admin data into the website.
 8. Post Data: Admin posts data to the website for display to users.
1. Analisis
 - a. Display Results

The results of the development of the Northern Green Elementary School Medan School Profile are presented in a web application format. The resulting web

design can be seen in the image below.

2. Home Page

The display results of the home page of the Northern Green Elementary School Medan school profile design can be seen in Figure 2 below.



Figure 2. Home Page

3. Profile Page

4. The resulting profile display for the Northern Green School profile design can be seen in figure 3 below.



Figure 3. Profile Page

5. Academic Achievement Page

The resulting academic achievement display for the Northern Green School Medan School Profile design can be seen in Figure 4 below



Figure 4. Academic Achievement Page

6. Gallery Page

The resulting gallery display for the Northern Green School Medan school profile design can be seen in Figure 5 below.



Figure 5. Gallery Page

7. Contact Page

The resulting gallery display for the Northern Green School Medan School Profile design can be seen in Figure 6 below



Figure 6. Contact Page

Questionnaire Design

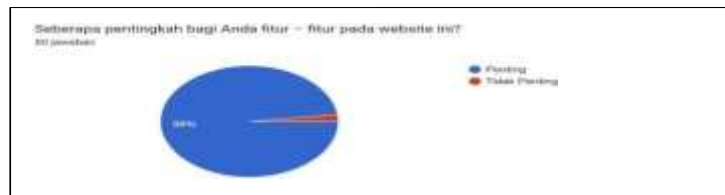
Questionnaire is a data collection technique that involves providing respondents with several written questions or statements to answer. In this case, the questionnaire will be distributed to parents looking for a school for their children. The school profile questionnaire was designed using the Natural Sciences (IPA) method as follows:

1. Reliability
 - a. How important are the features on this website to you?
 - b. From your perspective, how important is the messaging feature to your experience using this website?
 - c. Compare the achievement feature with the messaging feature. Which feature is more important to you?
2. Responsiveness
 - a. How would you rate the performance of the features on this website?
 - b. Overall, how well does this website meet your needs?
 - c. Have you ever experienced difficulties using messaging? If so, how important is it?
3. Assurance
 - a. How important is the messaging feature to you, and how well does it perform?
 - b. How would you rate the performance of this website in terms of performance compared to how important that aspect is to you?
4. Empathy

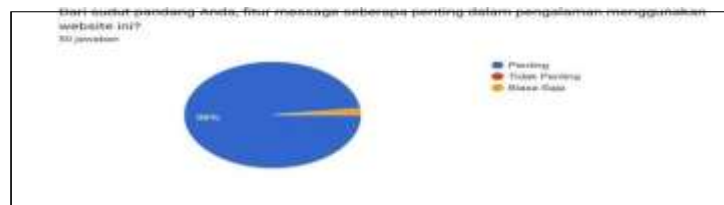
- a. How did the admin respond to you
- b. Was the information provided by the admin clear and easy for you to understand?

Research Questionnaire Results

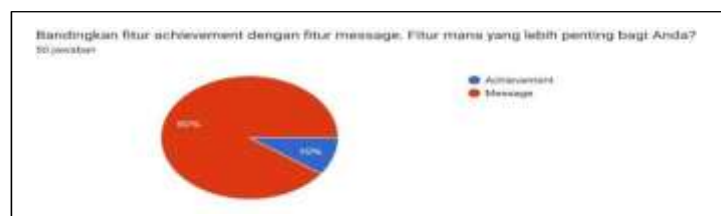
The questionnaire was administered using Google Forms. The purpose of this survey was to determine the effectiveness of the Importance Performance Analysis method implemented in the Northern Green School school profile. Fifty respondents answered the questionnaire. The following is a breakdown of the responses:



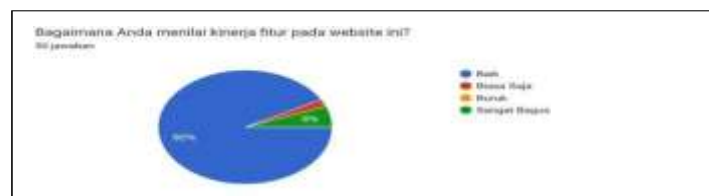
As many as 98% feel that the features on the website are important and as many as 2% feel that the features on the website are not importance.



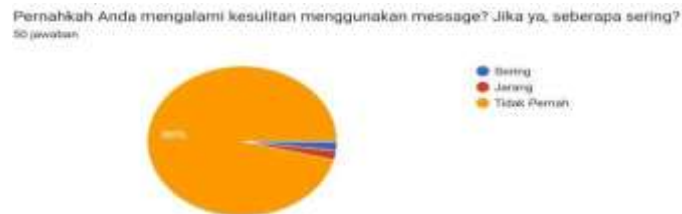
As many as 90% feel that the message feature is important on a website, and as many as 10% feel that the achievement feature is important on a website.



As many as 90% feel that the message feature is important on a website, and as many as 10% feel that the achievement feature is important on a website.



As many as 92% rated the performance of the features on the website as good, as many as 2% rated the performance of the features on the website as average, and as many as 6% rated the performance of the features on the website as very good.



96% never experienced any difficulties using the messaging feature, 2% rarely experienced any difficulties using the messaging feature, and 2% experienced difficulties very often. 98% considered the messaging feature important/good, and 2% considered it unimportant/bad.

Based on the results of a questionnaire distributed to 50 respondents, it was found that the majority of respondents considered the school profile, teacher information, and academic achievements to be very important features to display on the website. This indicates that parents of prospective students and the general public prioritize information related to the school's identity and credibility. Meanwhile, features such as photo galleries and school contact information were considered important, but not as important as core information such as the school's vision, mission, and achievements. Respondents reasoned that contact information could easily be obtained directly at the school, so it was not a top priority in the assessment. The results of the Importance Performance Analysis (IPA) method showed that attributes with high importance but still low performance should be the main focus of website development. For example, some respondents considered the website's homepage to be simple and not interactive enough, even though this feature is considered important because it is the first page users see. Therefore, it can be concluded that a school profile website should not only function as a publication tool but also be able to present priority information according to user needs. This analysis helped researchers determine which features need to be improved, and which features are already sufficient to meet user expectations.

The author will discuss the advantages and disadvantages of designing the Northern Green School Elementary School school profile in Medan. There are several advantages to designing the Northern Green School Elementary School school profile website in Medan, including:

1. The Northern Green School Elementary School school profile website becomes more attractive for promotion.
2. The implementation of a web-based Importance Performance Analysis method makes the website easier for users to understand.

There are several disadvantages to designing the Northern Green School Elementary School school profile website in Medan, including:

1. The website only displays everything related to the school profile.
2. It cannot create a registration form for new students.

CONCLUSION

Based on the discussion and website development conducted, the author can draw several important conclusions. The design of the Northern Green School Medan elementary school profile using the Importance Performance Analysis (IPA) method successfully demonstrated that: The application of the IPA method helped researchers identify information service attributes considered important by users, thus better aligning the school profile design with the needs of prospective students and parents. The questionnaire results indicated that the school profile, academic achievements, and teacher information were the top priorities, while additional features such as photo galleries and school contacts, although important, were not prioritized. The developed website is able to present school information in a more structured, comprehensive, and easily accessible manner, compared to the previous website, which relied solely on social media with limited information. The contribution of this research is that it illustrates that the IPA method can be used not only in the service sector but is also effectively applied in the development of web-based information systems in the education sector, particularly in the creation of school profiles. Suggestions for further research include: Develop the system by adding interactive features, such as an online registration form and a chat feature with the school to make communication more effective. Conduct testing with a larger number of respondents and a wider range of schools to ensure more representative analysis results. Integrate the system with school social media platforms to make information more accessible to the wider community.

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