

Enhancing Vocational Education Through Digital Marketing Strategies: A Prototype Approach

Yulindo¹, Nandra², Iswandi Idris³

yulindo@plb.ac.id¹, nandra@plb.ac.id², iswandi.idris@plm.ac.id³

^{1,2} Informatics Management, Politeknik Lembaga Pendidikan dan Pengembangan Profesi Indonesia, LP3I PSDKU Padang, Padang

³ Computer Engineering Technology, Politeknik LP3I Medan, Medan

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Abstract

This study investigates the challenges faced in digital marketing transformation within vocational education at Politeknik LP3I PSDKU Campus Padang. The problem stems from traditional marketing methods being less effective in attracting prospective students in a digital era. Employing the Software Development Life Cycle (SDLC) prototype methodology, the research aims to develop a responsive marketing information system tailored to user needs. Objectives include identifying key marketing tools and enhancing user engagement through interactive platforms. Results demonstrate improved enrollment figures and user satisfaction, validating the effectiveness of digital marketing strategies. The findings contribute to a framework that vocational institutions can utilize to modernize their marketing approaches effectively.

A. Introduction

Vocational education in Indonesia faces significant challenges in attracting new students. With the advancement of technology, digital marketing has become an important tool in achieving this goal. This study discusses how the SDLC prototype method can be used to develop an effective digital marketing system.

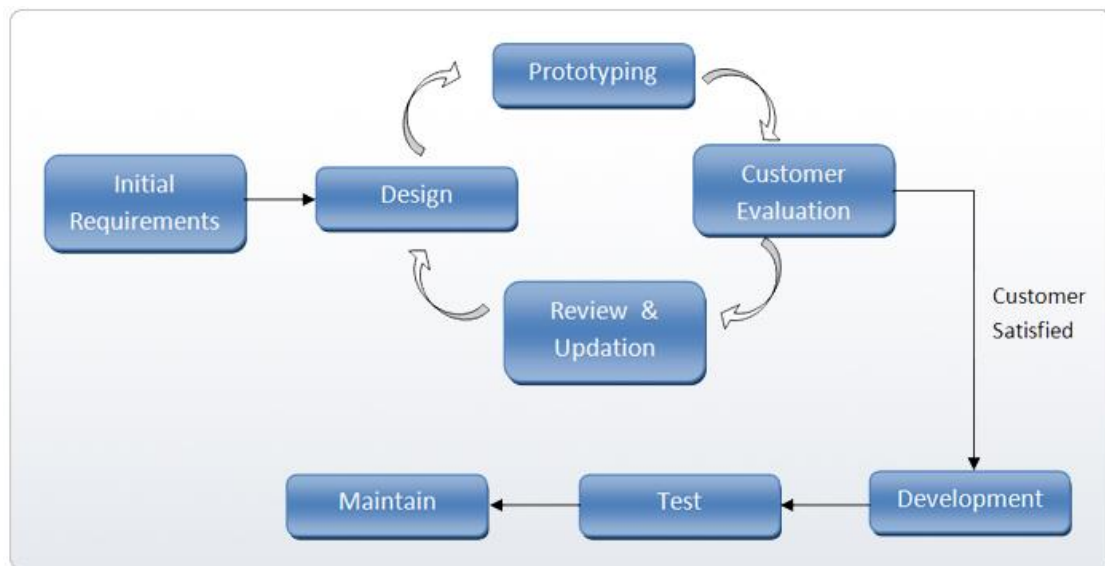


Figure 1. SDLC Prototype Model

State of the art and novelty: Currently, digital marketing and the use of information technology have become an integral part of marketing strategies in various sectors, including education. Several educational institutions have begun to implement the SDLC Prototype method to improve their marketing effectiveness. The novelty of this study lies in the application of the SDLC Prototype method specifically in the context of vocational education at the LP3I PSDKU Padang Campus Polytechnic. Although there are a number of studies on digital marketing and the use of information technology in education, the use of the SDLC Prototype method specifically to improve marketing effectiveness in vocational education environments is still relatively new and has not been widely explored. Therefore, this study is expected to provide new insights into the potential and benefits of implementing this method in improving marketing effectiveness in vocational education environments.

Table 1. *State of the art* Research

Conventional Methods in Vocational Education	Use of SDLC Prototype Method in Various Applications	Recent research: SDLC Prototype Implementation in the Context of Vocational Education Marketing
[1] [2] [3] [4] [5] [6] [7] [8] [9] [10] [11]	[12] [13] [14] [15] [16] [17] [18] [19] [20] [21] [22] [23] [24] [25] [26] [27] [28] [29] [30]	There are no studies yet traced in Google Scholar
Conventional methods in	SDLC Prototype has proven	The implementation of SDLC

vocational education marketing have been a part of history, but show limitations in reaching a wider audience. Although conventional methods such as traditional media and word of mouth are still used, their effectiveness is limited in today's digital marketing era.

useful in a variety of applications, such as software development, business process improvement, system testing, and new product development. The advantage of SDLC Prototype lies in its flexibility and ability to adapt to specific needs in various contexts.

Prototype in marketing vocational education at the LP3I PSDKU Padang Campus Polytechnic shows challenges that need to be overcome, especially in terms of adaptation and acceptance by stakeholders.

Despite facing several obstacles, the implementation of SDLC Prototype will provide a positive contribution in increasing the effectiveness of marketing strategies in the vocational education environment.

B. Research Method

1. Literature Study

The first step in the research methodology involves conducting a comprehensive literature review to gain a thorough understanding of the research topic and the current state of knowledge in the field of digital marketing information systems. This review specifically focuses on examining the application of the SDLC prototype method in the development of such systems. The aim is to identify relevant theories, concepts, and best practices that can be applied in the design and development of the proposed system, ensuring that the research is grounded in existing academic work.

2. System Needs Analysis

Following the literature review, the next phase is the system needs analysis. This phase is critical in identifying both the functional and non-functional requirements of the digital marketing information system at Politeknik LP3I PSDKU Padang Campus. The functional needs pertain to the specific features and functionalities that the system must include, while the non-functional needs focus on aspects such as system performance, security, and scalability. Data collection for this stage is conducted through surveys, interviews, and direct observation, engaging with the relevant stakeholders to ensure that all requirements are adequately captured.

3. System Design

Once the system requirements are identified, the system design phase begins. This phase involves designing the digital marketing information system using the SDLC prototype method, which allows for iterative design and testing. Key components of the system design include the creation of a database schema, user interface design, workflow design, and the integration of other necessary system features. The design process ensures that the system is both user-friendly and capable of meeting the identified functional and non-functional requirements, providing a solid foundation for the subsequent stages of development and implementation.

4. System Implementation and Testing

After the system design is finalized, the implementation phase commences. During this phase, the digital marketing information system is developed based on the design specifications, including the construction of the database, user interfaces, and the integration of all required features. Following implementation, extensive system testing is carried out to verify that the system functions as expected. This testing phase includes functional testing, performance testing, and security testing to ensure that the system is reliable and meets the quality standards outlined in the design phase. Additionally, feedback from initial users is collected to identify any issues or areas for improvement.

5. System Evaluation

6. The final phase of the research methodology is system evaluation. After the system has been implemented and tested, it undergoes a comprehensive evaluation to assess its overall performance and effectiveness in meeting the needs of its users. The evaluation process involves gathering feedback from system users to determine their satisfaction and the system's impact on the digital marketing activities at Politeknik LP3I PSDKU Padang Campus. Based on the evaluation results, any necessary improvements or updates to the system are made, ensuring that the system remains functional, user-friendly, and aligned with the evolving needs of the institution.

The research was conducted at the LP3I PSDKU Polytechnic Campus Padang, Jl. Pattimura No. 11 C-D, Kp. Jao, Kec. Padang Barat, Padang City, West Sumatra

Data Collection Procedure

1. Literature study: conducted to collect information and references related to the research topic.
2. Observation: conducted by observing and recording data in the field, such as business processes and marketing practices at the LP3I PSDKU Polytechnic Campus Padang.
3. Interview: conducted by interviewing related parties, such as lecturers, employees, and students of the LP3I PSDKU Polytechnic Campus Padang related to business and marketing processes.
4. Questionnaire: used to collect data from respondents related to the use of the marketing information system currently being used and user needs.
5. Data obtained from the data collection stage will then be processed and analyzed using appropriate statistical methods and data analysis techniques.

C. Result and Discussion

Initial Needs Identification:

The marketing activity preparation process at PSDKU Padang follows the Marketing SOP of the New Student Admissions Section (PMB), which involves several important steps:

1. Target Setting and Work Plan:

- a. Setting a realistic new student admission target and preparing a comprehensive work plan.
 - b. Formation of a committee to manage all PMB activities in a structured manner.
2. Training and Recruitment:
 - a. Conducting training for employees on marketing products and procedures, and recruiting presenters to represent the institution in presentations at schools.
3. Marketing Tools Preparation:
 - a. Preparing promotional tools such as brochures and registration forms, and submitting funds to support marketing activities.
4. Exploration and Presentation:
 - a. Conducting exploration at schools to get to know prospective students and conducting presentations to attract their attention.
5. Follow Up and Evaluation:
 - a. Conducting follow up on potential prospective students and holding coordination meetings to evaluate the progress of activities.
6. Additional Promotional Activities:
 - a. Conducting activities such as open houses and promotions in various media to increase campus visibility.
7. Administrative Support:
 - a. Providing support in terms of cleanliness, security, and computer systems for data entry.

Business Process Based on SOP:

SOP for new student admission procedures includes:

- Registration Preparation: Prospective students fill in their personal data, either directly or online.
- Examination Implementation: Exams and interviews are conducted online and offline, followed by the announcement of results and the payment process.
- Supervision: The process is supervised by the PMB committee to ensure compliance with the provisions.

Design Stage

Using the SDLC prototype method for digital marketing information system design:

- Design Design: Applying the SDLC prototype method to improve system effectiveness.

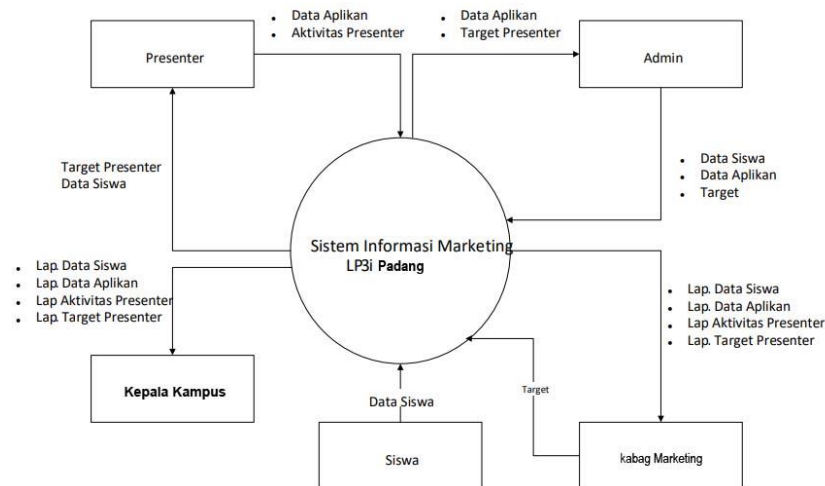


Figure 2. DFD Level 0

Figure 3. Initial Prototype Design

- Technology Identification: Selecting the latest technology, such as a cloud-based system, to support better interaction with users.
- Prototype Creation: Creating an initial prototype to get user feedback.



Figure 4. Prototype

Figure 5. Confirmation Of Prospective Applicants By Marketers

Figure 6. Applicants Respond

Figure 7. Applicants Submit Payment

Figure 8. Finance Staff Process

Customer Evaluation

Customers have been involved in the evaluation process to ensure the system meets their needs.

The feedback provided must be collected and analyzed for further improvement.

So that the main menus appear, including:

1. New Student Admissions Schedule
2. New Student Admissions Waves
3. New Student Admissions Targets
4. School Data

Testing and Development

System testing must be conducted to ensure that all features are functioning properly.

After testing, the final development phase is conducted to fully implement the system.

The testing process found several additional main menus, including:

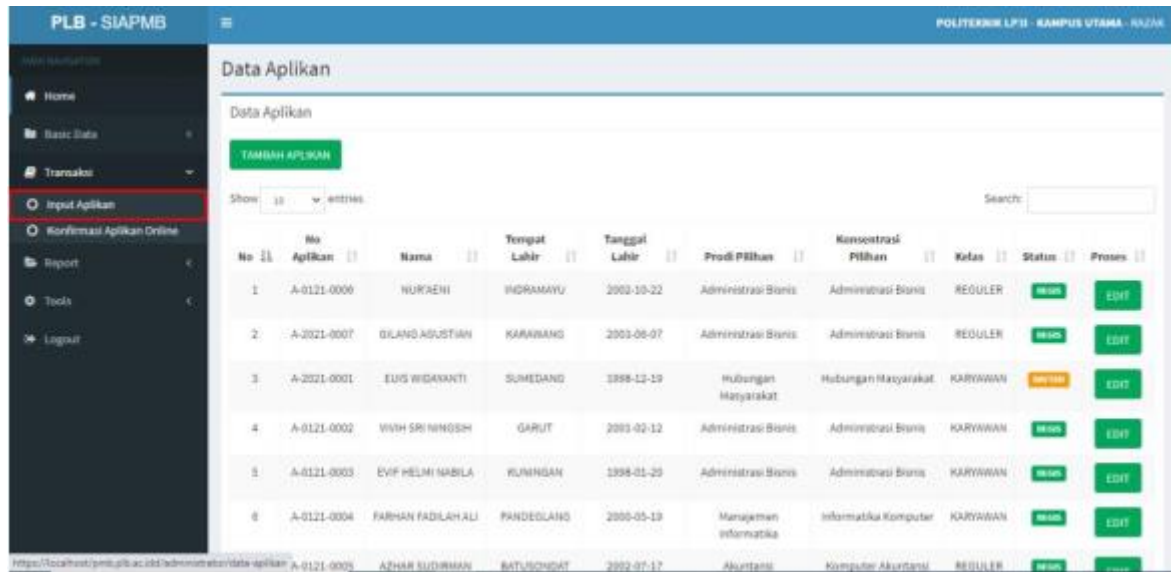


Figure 9. Applicant Edit

Maintenance

The system that has been developed must be maintained periodically to ensure continued functionality. Improvements and adjustments need to be made according to changing user needs.

Some additional aspects include:

- Analysis of the Influence of Audits on Marketing Processes:
 - The influence of audits on marketing procedures needs to be explored further. This includes how audits can improve transparency and accountability in marketing activities, as well as how audit results can be used to refine marketing strategies at LP3I Polytechnic.
- Feedback from Prospective Students:
 - Another important aspect is the collection and analysis of feedback from prospective students regarding their experiences during the registration process. This can provide valuable insights for future system improvements and marketing strategies.
- Comparison with Other Institutions:
 - Comparison of the effectiveness of marketing procedures at

PSDKU Padang with other institutions can also be added to provide broader context and identify best practices that can be implemented.

- Impact of Additional Promotional Activities:
 - The impact of additional promotional activities such as open houses and social media on the number of registrants and the image of the institution needs to be analyzed. This data can help in understanding the most effective promotional channels.

Review and Update

The review process is conducted to improve and update the prototype based on the feedback received.

These updates are essential to improve the functionality and usability of the system.

Recommendations

- Marketing Process Audit: It is important to explore the impact of audits on transparency and accountability in marketing activities.
- Feedback Analysis: Collect and analyze feedback from prospective students for future system improvements.
- Comparison with Other Institutions: Conduct a comparison of marketing procedures with other institutions to identify best practices.
- By implementing these steps, it is hoped that marketing activities at PSDKU Padang can continue to develop and adapt to market needs.

D. Conclusion

The procedures outlined in the Marketing SOP No. PMS-14-01 are generally adhered to, ensuring that the steps required for effective student recruitment are in place. However, it is critical to establish a consistent mechanism for monitoring and evaluating these processes. This would help guarantee that each step is executed as planned and to identify areas for improvement.

Training and recruitment are key elements in the marketing strategy, particularly when it comes to product knowledge and presenter recruitment. The training provided is essential for ensuring that presenters are well-prepared to deliver high-quality presentations. To enhance this, it is recommended that regular evaluations of the training sessions be conducted, to ensure that they remain effective and up-to-date.

The marketing tools, such as brochures and registration forms, are prepared well to attract prospective students. However, in order to keep up with evolving trends, it is necessary to periodically review and update these materials. This will ensure they stay relevant, fresh, and engaging for the target audience.

A systematic approach to following up on prospective student data is also crucial. Utilizing a digital system for data management and reminder notifications

could significantly improve the efficiency of this process, ensuring that no potential opportunities are overlooked.

Moreover, promotional activities like open houses and media campaigns should be increasingly integrated with digital technology. Leveraging social media and other digital platforms can help expand the reach of marketing efforts and engage prospective students more effectively.

Finally, it is essential to involve prospective students in the evaluation of the process. Collecting and analyzing feedback from them provides valuable insights, which can guide future improvements and ensure that the recruitment process continuously evolves to meet the needs of students.

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