

Research Article

Development of an Integrated Digital Business Platform as a Realization of Customer Relationship Management for Polimedia Student Entrepreneurship

Tipri Rose Kartika, Tri Fajar Yurmama Supiyanti

Politeknik Negeri Media Kreatif, Jakarta

Abstract.

For nearly 14 years of existence, Politeknik Negeri Media Kreatif (Polimedia) through entrepreneurship courses has been producing the output of various businesses carried out by students. However, there is no business platform that accommodates all student businesses so that they become businesses that many do not continue. Currently, the digital world is a part that cannot be separated from various lines of life. Since the pandemic, most activities were carried out online. It takes significant strides to stay in the middle of big competition. *Customer Relationship Management (CRM)* is a term used in business in the form of steps or procedures related to customers in a website. Departing from this, in this research proposal the proposer submits the development of an integrated digital business platform as a customer embodiment relationship management for Polimedia's Student Entrepreneurship Platforms. It is used to accommodate all student-run businesses as well as an effort to market it widely.

Keywords: business platform, customer relationship management, entrepreneurship, students

Corresponding Author: Tipri
Rose Kartika; email: EMAIL

Published 7 March 2024

Publishing services provided by
Knowledge E

© Kartika, Supiyanti. This article is distributed under the terms of the [Creative Commons Attribution License](#), which permits unrestricted use and redistribution provided that the original author and source are credited.

Selection and Peer-review under the responsibility of the JICOMS Conference Committee.

1. Introduction

Dikti offers creativity programs to its students, which include entrepreneurship, and a student entrepreneur program is also available to support those who are interested in creating job opportunities. These policies have been implemented to enhance graduates' quality by promoting essential values such as responsibility, teamwork, independence, and business development through creative endeavours in their respective fields.

Entrepreneurship development at the Politeknik Negeri Media Kreatif has prepared an entrepreneurship education curriculum generally containing material and activities related to building an entrepreneurial mental attitude, training communication skills, building networks and preparing profit-oriented business plans. For nearly 14 years of

 OPEN ACCESS

existence, Polimedia through its entrepreneurship courses has produced outputs for various businesses run by students. However, no business platform accommodates all student businesses, so many do not continue.

Nowadays the world is digital has now become an inseparable part of various aspects of life. Especially

Since the pandemic, most activities have been carried out online. No exception shops. According to a Databoks survey, there has been an increase in the frequency of online shopping in among young people up to 39.5%. In fact, previously they admitted that it was rare use digital platforms to shop. Not only that, according to the Central Agency Statistics, 70% of respondents use social media and 41.8% use WhatsApp to access information including COVID-19. The industrial era 4.0 or society 5.0 and the Covid-19 outbreak are fundamental things that require models' business is switching from conventional to digital.

Digital business is a commercial activity that uses information technology in its application, both during product manufacture and marketing activities. Activity This business is related to goods and services, changes in physical type as well as various possible businesses carried out using the internet [3]. In digital business, Innovation plays an important role in its success, companies are expected to be deeply innovative meet customer needs. It takes a big step to stay in the middle big competition. Customer Relationship Management (CRM) is a term used in business in the form of steps/procedures related to customers in the form of devices soft. Departing from this, in this research proposal the proposer proposes Development of an Integrated Digital Business Platform as a Customer Realization Relationship Management for Polimedia Student Entrepreneurship. Platforms It is used to accommodate all businesses run by students as well as an effort to market it widely.

Customer Relationship Management (CRM) can be conceptualized in various forms based on the media used, such as: traditional, electronic (E CRM), mobile (M-CRM) and social (S-CRM). With the increasingly down to earth social media, S-CRM activities are starting to be noticed in this sector. Social media is a platform based on e-commerce and plays a major role in the interaction between customers and organizations, as well as customers [4][5] Apart from being based on Social CRM, other customer services can use websites/electronics (E CRM). The interaction between fellow customers and customers and the company focuses on the website. Another medium that can be used is cellular/cellphone with applications share messages like WhatsApp and Telegram.

Interaction between fellow customers and companies can be done through groups made by the company. This model is known as Mobile (M-CRM). And some this

CRM model can also be combined with video sharing applications such as YouTube. Researched CRM as it is associated with digital transformation and sustainable business model innovation in Europe [8]. Advances in digital technology and innovation. The company has a big impact on the sustainability of the friendly business sector environment (green technology). This shows that digital technology contributes good at customer service management. Developed digital business incubator platforms can accommodate businesses to make them more widely known, as well as a means of creating young entrepreneurs at STIE Nobel Indonesia. Of course, models this can be adopted for use in developing digital business, maintaining customers and at the same time invite customers to work together in one community [1].

Implemented CRM using a website on pharmacy business. Customers have a profile/account on the company website and can submit complaints/suggestions or similar through this feature to followed up by the company [13]. Websites as digital-based products can be used in customer service management. Develops communities web-based virtual entrepreneurship [6]. This takes the form of an online discussion forum related to entrepreneurship which can make it easier for people to access information entrepreneurship, as well as being a link with the business world. Identified the advantages and factors that influence management customer relations using social media in companies in India [4]. According to him, CRM will get maximum benefits if it can combine methods traditional, electronic, mobile and social media and other applications.

2. Material and Methods

In this research, a digital platform will be developed with website as the main stage, which is integrated with social media, applications message sharing as well as video sharing application. This research is located at the State Polytechnic Creative Media and using Research and Development (R&D) Methods. Sugiyono [12] wrote it as a method whose output is a certain product, and testing is carried out on its effectiveness. Budiyo [7] concluded as follows a method that produces a product in a particular area of expertise with the product effective sideline. So, research and development methods are processes for produce an outcome that is scientifically tested.

Data collection techniques in the form of interviews and data are processed and described for the needs of the system being developed. Literature study to strengthen concept studies and application studies to adopt relevant features. Modelling design to describe the system as a whole in the form of a context diagram. Platform development

with WordPress Content Management System (CMS) and MySQL as the database. Testing is carried out on user and application interaction through interface design, both with PCs/laptops and gadgets

This platform is planned in the form of an application (software) so that the approach used adopts the Waterfall Model. The Waterfall model is a classic model with systematic and sequential stages, including (1) requirements; (2) designs; (3) implementation; (4) verification; and (5) maintenance [11]. These stages are combined with the R & D stages of Borg and Gall [2] and are adapted to the needs of the application being developed as shown in the following figure:

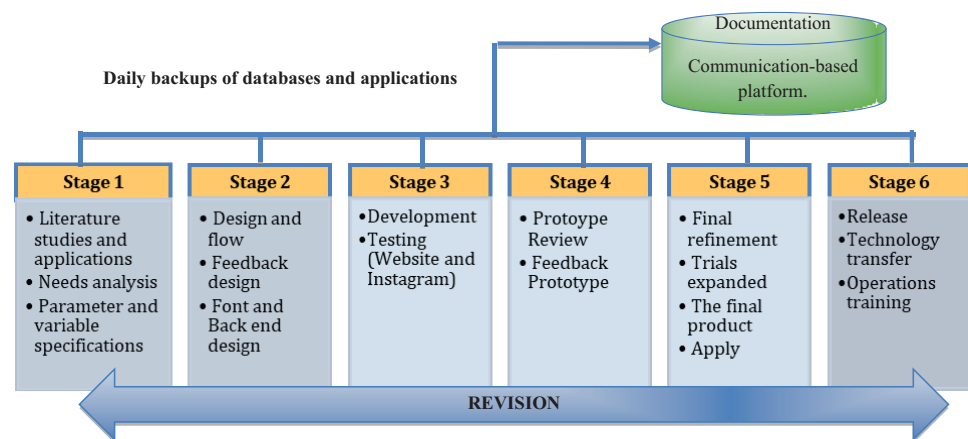


Figure 1: Platform Development Model.

3. Result and Discussion

Refers to a development model that has been adapted to needs research as in the picture above, the planning is described as follows:

3.1. Requirements

Data collection; with interviews with stakeholders. Related coverage of customer service, promotions, product marketing, transactions, hosting, domains, features and applications to be used, including their experience in interacting with similar applications. Literature and application studies; get a theoretical study of the application will be made related to research to strengthen concept studies, including the identification of problems. Application studies, by conducting a series of trials against marketplace applications such as Bukalapak, Shopee, Tokopedia and direct sales via social media, to see its features, workflow and processes that can be adopted into developed applications.

Needs analysis; is an analysis of data obtained related to flow and system framework and platform. Determination of parameters and variables required analysis; is an analysis of data obtained related to flow and system framework and platform. Determination of parameters and variables.

3.2. Design

At this stage, the initial design of the proposed model, flow and work process is carried out main application (website) and supporting applications (social media, message-sharing applications and video) that will be developed. Stages are discussed with stakeholders' interest in design and flow, both on websites and media social, messaging and video-sharing applications. If you haven't found a common ground, process it can return to the requirements stage. The following table presents this stage :

TABLE 1: Model Design and Flow.

Design	Description
Specification	The basic framework of the entrepreneurship E-CRM model.
Architecture	Description of hardware and software that will be used in Entrepreneurship E-CRM.
Database / Backend	Type, field, Rational Database and variables
Interface/ Frontend	Interaction between E-CRM applications and users
Script/coding	10 point, italic

3.3. Development

Develop effective application workflows, database structures, and inter-entity flows within the required CRM logical framework. Implementation of the design concept into a web programming language, interface design, and data storage which becomes the system standard. Carrying out white and black box testing in the internal environment, to ensure the system runs according to the logical flow and in accordance with the desired targets.

See workflows and processes of this platform as a whole, can seen in the context diagram in the picture following:

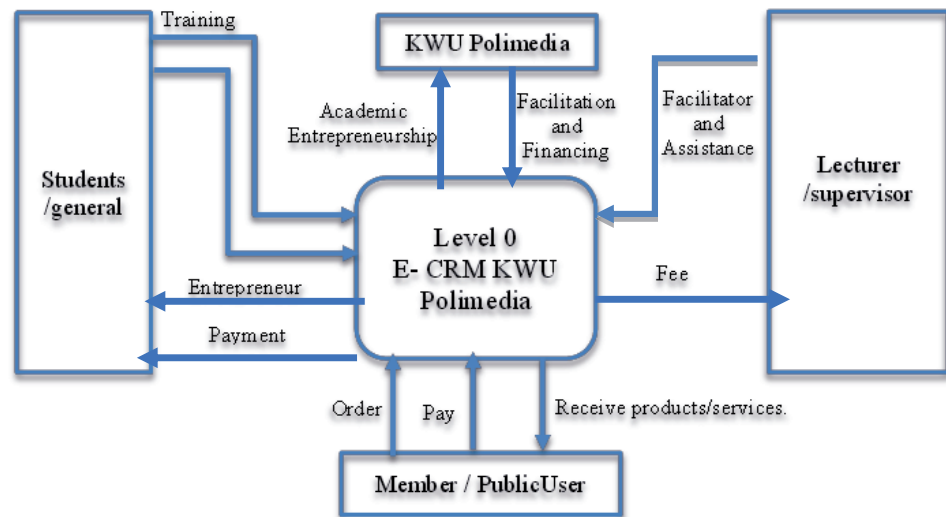


Figure 2: Context diagram.

Ensure the flow and features in the application by carrying out white and black box testing are according to plan. Potential users are involved at this stage in an effort to track existing deficiencies and provide feedback.

3.4. Verification

Completion of CRM application development must go through this stage, including:

3.4.1. Interface Design

Display when a user accesses the platform via the internet network using a computer, laptop or smartphone.

This page provides information on superior products for study programs that have gone through product feasibility testing to be marketed freely. Currently, products are divided into three categories, namely food and beverage products, clothing products and book products.

This platform supports payments via plug-in woo where we only use the bank transfer method for now, while for delivery services we use plug-in biteship to make things easier and wider in area coverage. This platform also supports member registration and logging in to be able to carry out transactions on the products offered in order to optimize the implementation of the CRM being developed.

All purchasing activities on the platform are completely recorded and connected directly with customers, via email and chat. So that customer data can be obtained on

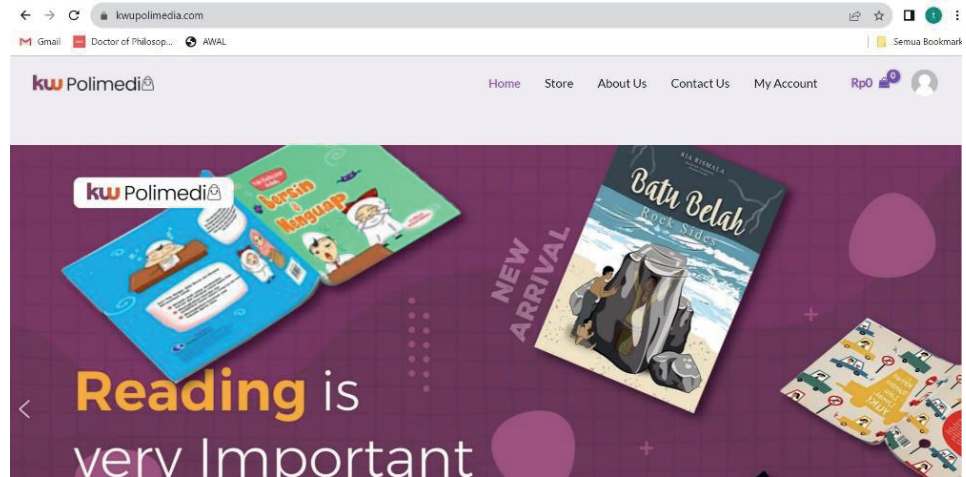


Figure 3: Home KWU Polimedia.

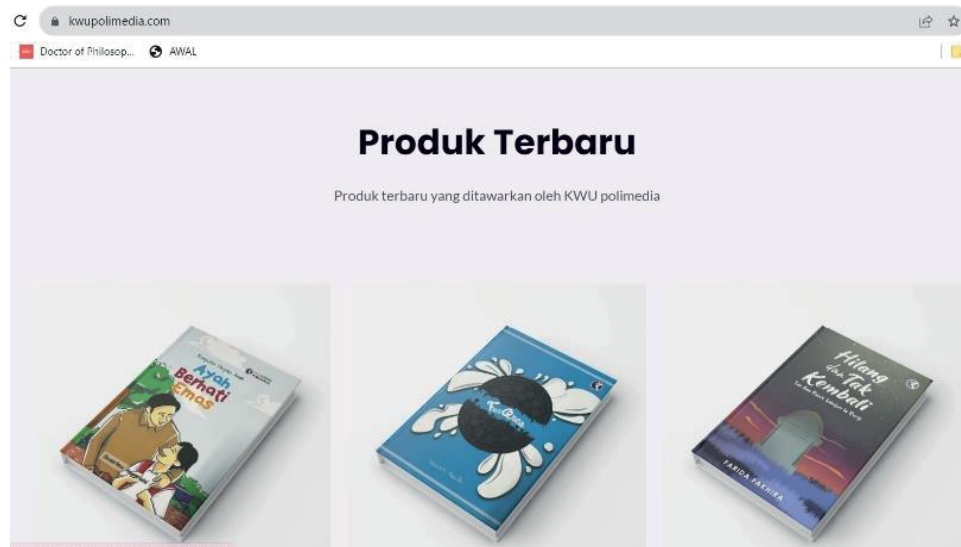


Figure 4: Products Page.

what days they make purchases, what types of products they like, and what services they often use, reflected in the Advance Report. As depicted below:

The design of the User Interface Platform on Instagram social media as an embodiment of Customer Relations Management is as follows.

3.4.2. Platform Testing

Testing of the Polimedia Entrepreneurship CRM Platform is carried out using the Black Box and White Box testing method to ensure that the necessary improvements have been completed until they are deemed ready to be implemented. If it is necessary, the stages can return to the previous stage or the initial development stage.

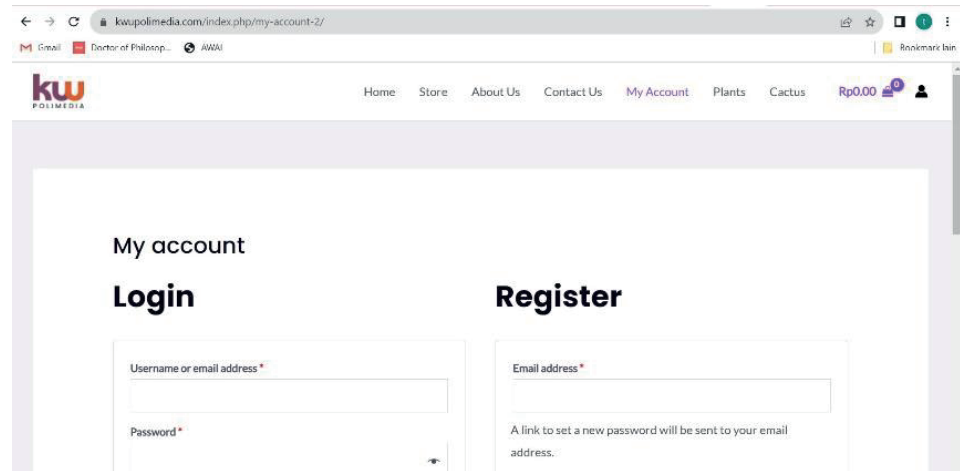


Figure 5: Log in and Register Page.

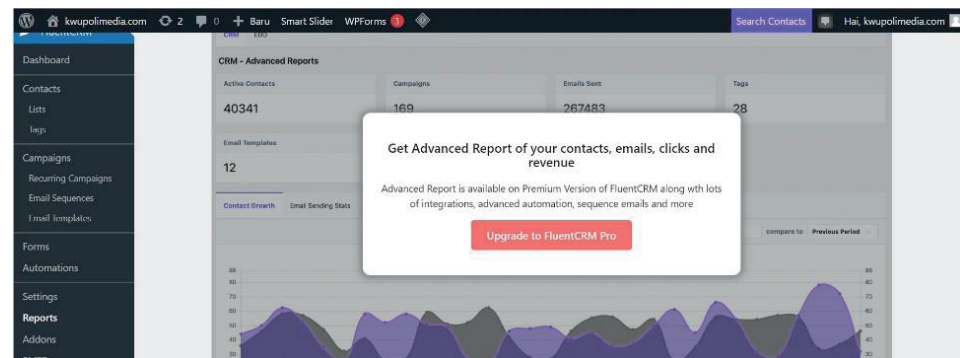


Figure 6: CRM Advance Report.

4. Conclusion

Utilization of website-based business platforms and social media as an embodiment of Customer Relations Management focuses on decision support, market research, marketing targets, customer service, and customer collaboration on products and services. With this platform, businesses can improve and optimize the use of customer relationships, and business intelligence tools in an organized manner.

Meanwhile, suggestions for future development are to provide employees or special people who serve CRM activities to interact directly with customers online/offline. Increasing 3-party logistics services to premium. There is a development of a web platform for an entrepreneurial product selection system that can be directly input and validated. Future platform development could become a marketplace with a wider scope, as well as the use of Financial Technology (Fintech) in it



Figure 7: Instagram User Interface.

Acknowledgements

Thank you to Allah SWT who has given all the blessings and convenience so that this research can be realized. Thank you to Center for Research and Community Service (P3M) Politeknik Negeri Media Kreatif for Research Grand No. 569/PL/27/HK.00/2023.

References

- [1] Agunawan A, Hazanah N, Ahmad F. Development of the “Nobel Gadde2 Na” Platform as a Realization of Academic Entrepreneurship at the STIE Nobel Indonesia Business Incubator. *Inspiration. Journal of Information and Communication Technology*. 2020;10(2):145–53.

- [2] Borg and Gall. *Educational Research: An Introduction*. New York, London: Logman; 1983.
- [3] Bukausaha.com. (2020). What is Digital Business? Definition, Types, How it Works, Advantages and Disadvantages - BukaUsaha. <https://bukausaha.com/bisnis-digital/>
- [4] Chatterjee S, Chaudhuri R, Vrontis D, Thrassou A, Ghosh SK, Chaudhuri S. Social customer relationship management factors and business benefits. *Int J Organ Anal*. 2020;29(1):35–58.
- [5] Dedeoğlu BB, van Niekerk M, Küçükergin KG, De Martino M, Okumuş F. Effect of social media sharing on destination brand awareness and destination quality. *J Vacat Mark*. 2020;26(1):33–56.
- [6] Despriansandi, "Design and Build a Web-Based Virtual Entrepreneurship Community Application", *Journal of Algorithms*, vol. 17, no. 2, hlm. 192 - 198, Sep **2020**.
- [7] Dr. Budiyo Sapaturo, M.Pd. (2017). *Development Research Management (Vol. 1)*. Aswaja Pressindo.
- [8] Gil-Gomez H, Guerola-Navarro V, Oltra-Badenes R, Lozano-Quilis JA. Customer relationship management: digital transformation and sustainable business model innovation. *Ekon Istraz*. 2020;33(1):2733–50.
- [9] Komunitas. (2020). In *Wikipedia bahasa Indonesia, ensiklopedia bebas*. <https://id.wikipedia.org/w/index.php?title=Komunitas&oldid=18109525>
- [10] Latief F. Dimensions of Relationship Marketing on Customer Loyalty of Indihome Triple Play PT. Telkom [BJRM]. *Bongaya Journal for Research in Management*. 2019;2(1):11–6.
- [11] Roger S. Pressman, R. S. (2010). *Software Engineering: A Practitioner's Approach*. 161.
- [12] Sugiyono. (2012). *Quantitative, Qualitative, and R&D Research Methods*. Alfabeta-Bandung.
- [13] Yunita H, Farida I. Implementation of Web-Based Customer Relationship Management (Crm) to Improve Customer Service (Case Study: Sentosa Duta Pharmacy Tangerang). *Jurnal RASSI*. 2020;5(1):65–72.