



E-Commerce Design with Business Model Canvas and to Increase Sales using Seo at A Food Store

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Abstract

This research focuses on a food store that faces several problems, as it still uses manual methods such as a slow product ordering process. Currently, the seller has to manually determine the product price, check the stock availability, and confirm it to the customer, which causes the transaction time to be longer. In addition, there are issues with data recording errors and the risk of losing information on paper records that are also used manually. To overcome these problems, this food shop intends to build an e-commerce business through a website. The approach chosen is to utilize a content management system (CMS), specifically using WordPress as the CMS and for the method using the waterfall method. CMS allows the creation, organization, distribution, publication, and maintenance of corporate or institutional information without requiring expertise in HTML coding. WordPress is very easy to use and easy to access. The proposed solution involves analyzing business processes using the Business Model Canvas (BMC) approach and then building an e-commerce business by designing a website based on CMS, specifically WordPress. This e-commerce website will transform the conventional business model into an online business model, facilitate increased product sales, minimize data recording errors, and generate sales reports using a database for information storage. In creating a website using wordpress which is assisted by the waterfall method which hopes to have an interface and tools that can make it easier for users to use. In addition, this system will provide customers with an efficient online ordering experience and easy access to product information, thereby increasing the efficiency of the purchasing process.

Keywords: Food, e-Commerce, Content Management System, Waterfall, Business Model Canvas

1. Introduction

The development of the internet today makes a big impact in the business world. Information technology makes business processes easy to overcome intense competition in the business world. One example of the development of information technology today is web applications and the application of e-commerce to help market the products and services offered



by companies in the business world. With the existence of a website and the application of e-commerce in a company, it will have a big impact on the company, especially in the field of product marketing. This food shop is a company engaged in the sale of food which was founded in 2018. E-commerce websites will help in selling products online. Customers can easily buy products and can expand product marketing so that food stores have a competitive advantage in the business world. This food shop has several problems in running its business processes. First, handling the product order process takes about 3 to 7 minutes for each transaction that occurs. The seller must tell the price of the product, takes time to calculate and check the stock of products available in the store, and confirms the customer for product availability. Therefore, research is needed to produce an e-commerce website so that the online sales process becomes more efficient. Secondly, the occurrence of errors when recording data on paper documents and the loss of sales information in the form of paper which results in information for making reports being less accurate and informative. Therefore, research is needed to produce an e-commerce website with data stored in a database so that information is stored properly.

The purpose of this research is to analyze the business processes that run with the Business Model Canvas (BMC) approach in order to change a conventional business model into an e-commerce business model through the website. This is done in order to produce more optimal performance, especially increasing product sales. In addition, this research also aims to build an e-commerce business through a website to make it easier for customers to get product information and place orders online so as to make the purchasing process more effective and efficient. This website can also help stores reduce data recording errors and the loss of paper information, where the information is used for making reports, so that the data is stored properly in the database. The research conducted suggests that e-commerce not only simplifies the sales information system process from manual to computerized, but also changes the relationship or interaction of ordering, paying, and viewing products, and can even find out transaction history anytime and anywhere. The analysis carried out is about the sales system that is currently running in a food shop where monthly reports are still made by handwriting. Likewise, the data processing generated from transactions that occur is still handwritten, so there is a possibility of errors or mistakes when writing and calculating. Therefore, e-commerce is needed to support this work in order to make sales, and make reports.

The research conducted said that the results showed that the Business Model Canvas can be used well by Toko Dunia Makanan. This can be proven by the Business Model Canvas design made in the study to map business activities into the model. In addition, the results of this study also show the value of turnover that can be obtained, the value of profits generated, and the total assets owned by Toko Dunia Makanan. Therefore, researchers can assess that the business run by Toko Dunia Makanan is feasible to continue running. The research conducted concluded that with the customer satisfaction questionnaire page and the implementation of the CSI (Customer Satisfaction Index) method, the store can find out the customer satisfaction index for the e-commerce website services built, so that it can be used as an evaluation material for better website development.

2. Literature Review

2.1 Business Model Canvas (BMC)

The meaning of business according to is a business of organized individual activities to produce and sell goods and services for profit in meeting the needs of society. An institution that produces goods and services needed by the community. From this understanding, it can be concluded that a business actor or an organization in conducting its business consists of a) producing and / or distributing goods or services, b) seeking profit (profit), and c) meeting the wants or needs of consumers / society. Business Model Canvas (BMC) is a business model of a logical description of how an organization creates, delivers and captures value. Business model canvas (BMC) has advantages in business model analysis, namely being able to describe simply and thoroughly the current condition of a company based on consumer segments, value offered, value offering paths, customer relationships, revenue streams, vital assets, BMC partners are displayed in the form of a canvas containing 9 (nine) elements consisting of customer segment, value

proposition, channel, customer relationship, revenue stream, key resources, key activities, key partnerships, and cost structure. cooperation, as well as the cost structure owned.

With the BMC, it will improve coordination between individuals in the team so that they can work well together, more effectively and on target in developing micro-enterprise businesses. Third, BMC increases motivation in the business being conducted. The use of BMC can motivate micro business actors to think and predict the future course of the business. predict the course of the business in the future.

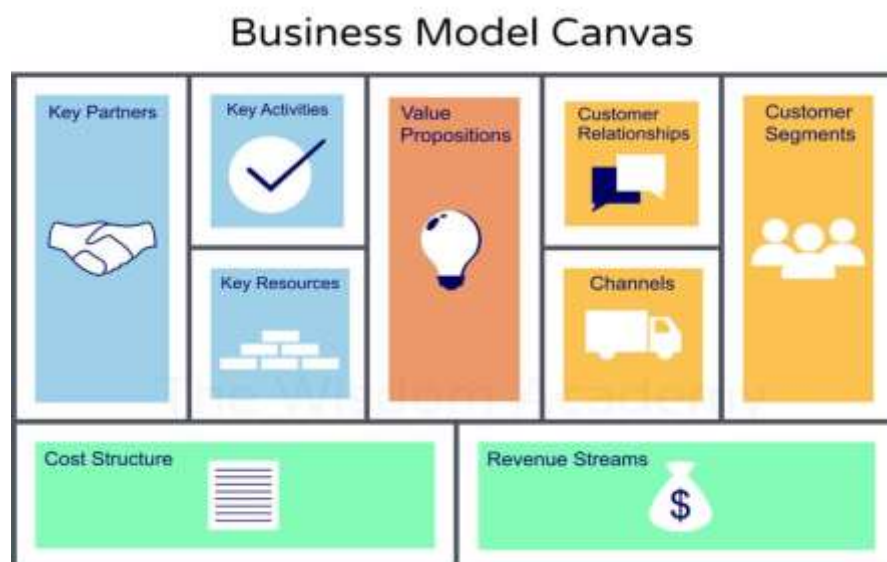


Figure 1. Business Model Canvas (BMC)

2.2 Marketing Concept

In terms of the marketing concept, which originally placed the company as the first and last party of a series of business activities, it completely changed to consumers as the beginning and end of the company's activities. The development of the role of marketing revealed by Webster (1992) provides the latest alternative to the concept of marketing that acts as an organizational network. The logical consequence is that all company activities must be directed to consumers, given the increasing competition, but in carrying out its activities, the company must be required to be able to carry it out better than its competitors in order to ultimately provide customer satisfaction and this is the company's goal.

In order for consumer satisfaction to be carried out in an integrated manner, the company should use marketing as a strategic business concept that provides sustainable satisfaction, not just for a moment, not only for investors / owners and consumers but also provides sustainable satisfaction for its employees. In this concept, the company tries to satisfy all its stakeholders. In the non-profit/macro-micro/positive phenomenon, marketing is relevant to all organizations, as long as they produce products and have customers. The focus of marketing has shifted past commodity focus, institutional focus, functional focus, managerial focus and social focus. The shift in focus occurs due to awareness (consciousness) among marketing actors. The shift in awareness from one level to a higher level of actors will explain and distinguish the boundaries of the marketing concept.

2.3 Search Engine

Search engines are one of the applications that are often used to find information from the internet. Often search engines do not provide the information expected by their users. This may be due to system errors, or because the user is unable to express their information needs properly. Whatever the reason, search engines are always expected to provide results that match the user's information needs. Learning algorithms are one of the methods to improve the quality of information obtained in information retrieval systems. Learning algorithms are one way to improve search

results in information retrieval systems by informing or teaching the system about the user's information needs. This will provide lessons to the system, so that it is expected that in the next search, the system will obtain more satisfactory results than before.

Despite their promising benefits, search engines do not always provide accurate information. This shortcoming is usually caused by two main problems. First, the search engine is unable to find patterns from relevant documents. Second, the user does not state the query correctly, for example by using redundant sentences. The first problem can be solved by improving the search engine technology, so that the search engine can recognize the patterns of relevant documents. The second problem can be solved with search algorithms. Since human and computer languages are different, there are often communication errors between the two. Learning algorithms attempt to overcome this by attempting to understand the user's information needs, then translating these information needs into language that the computer understands.

2.4 Search Engine Optimization

SEO is a search technique that uses keywords or phrases that contain indicators contained in web pages, this information will be indexed by search engines. SEO is a technique of optimizing a page that contains the relevant keywords or phrases that will be indexed by search engines as search keywords. The technique is used to get a favorable position in the search engine that matches the keywords on the website page. The purpose of SEO is that the web or blog is always on the front and top page of a Search Engine, so that it is always in the top position, then it is likely that the web or blog is visited frequently. possibility that the web or blog is visited frequently.



Figure 2. Search Engine Optimization

3. Research methods

The waterfall method, also known as the waterfall software development life cycle model, is a traditional approach to software development. This approach is based on the concept that software development should proceed in a linear and structured manner, with each phase being interdependent. In general, the waterfall method consists of several phases that are performed sequentially, such as analysis, design, implementation, testing, and maintenance. Each phase has pre-defined goals and outputs.

1. **Analysis:** This phase involves an in-depth understanding of user requirements and the needs of the software to be developed. System analysts work closely with stakeholders to identify requirements, gather information, and draft clear system specifications.
2. **Design:** In this phase, the development team designs the software architecture that will fulfill the predefined requirements. This design includes designing the structure, user interface, business logic, and integration with other systems (if any).
3. **Implementation:** The implementation phase involves programming and writing software code based on the design. The development team works to turn the design into a working software product.
4. **Testing:** Once the implementation is complete, the software is thoroughly tested to ensure

that it works according to the requirements specified earlier. Tests may include functional testing, security testing, performance testing, and integration testing.

5. **Maintenance:** Once the software is launched, the maintenance phase begins. The development team is responsible for fixing bugs, addressing issues that may arise, and updating the software as needed.

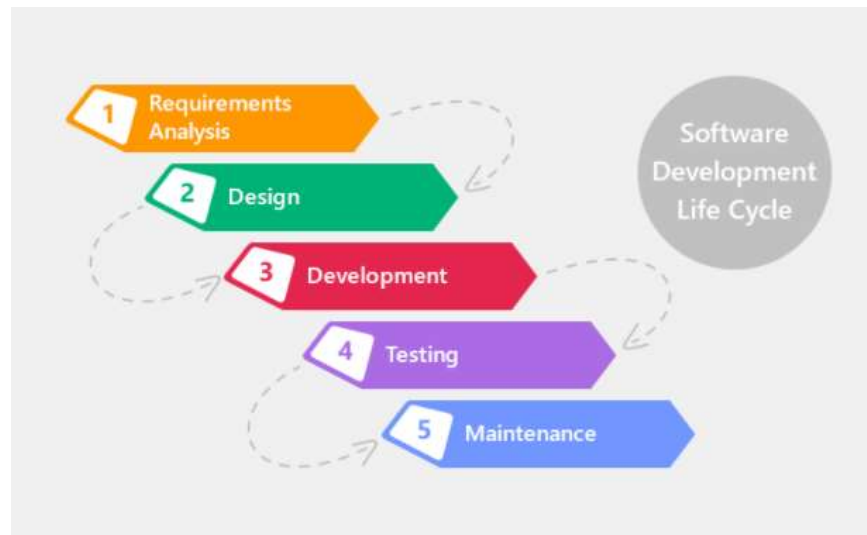


Figure 3. Waterfall

One of the important characteristics of the waterfall method is that each phase is completed before the next phase begins, and there is no possibility of significant changes between the phases. This approach relies heavily on careful planning and precise specifications from the start. Although the waterfall method has been widely used in the information technology industry, this approach has some disadvantages. One of them is the lack of flexibility in handling changing requirements or changes needed in the development process. In some cases, better requirements may arise after the analysis phase is complete, which necessitates going back to the previous phase.

Therefore, more modern software development approaches, such as Agile methods, have become more popular as they provide greater flexibility in handling changes and allow for faster iterations in software development.

4. Results and Discussion

4.1 Business Model Canvas (BMC)

The framework describes the outline of the logic flow that runs in the research made. The sales system at the food store is currently done in a conventional way where the service is still manually to customers in the store. Handling the product ordering process takes a relatively long time for each transaction that occurs. The seller must tell the price of the product, then takes time to calculate and check the stock of products available in the store and confirm to the customer the availability of the product. There are also errors when recording data on paper documents and the loss of paper sales information which results in information for making reports being less accurate and informative.

Therefore, a study was conducted that analyzed the business processes carried out in a food store with the Business Model Canvas (BMC) approach in order to change a conventional business model into an e-commerce business model using a website. This is done to produce more optimal performance, especially increasing product sales. This e-commerce website will Simplify the

process for customers to place orders and access product details online. Making the purchasing process more efficient. This system will also minimize data recording inaccuracies and generate sales reports using data. That can be stored in the database. Analysis of the current business processes in food stores will be described using UML, namely the activity diagram which is explained as follows:

1. Ordering Process

The customer selects the desired product, then the customer asks the admin whether the product is available or not. If available, the customer will be redirected by the admin to the payment process. If the product is not available, the admin will tell what products are currently available and the customer can choose the product again.

2. Goods Payment Process

The admin will tell the customer the nominal price to be paid. The admin will ask for the customer's complete address to calculate the total price, which is the product price plus shipping costs. The payment process is done by transferring between accounts. If the customer has made a payment, the customer must send proof of payment to the admin to serve as proof that the payment has been made. After that, the admin will carry out the shipping process. However, if the customer has not provided proof of payment to the admin, the delivery will be delayed until the customer sends the proof.

3. Goods Delivery Process

The admin will notify the warehouse division to pack the goods that have been purchased by the customer, then the warehouse division goes to the courier as a third party. The warehouse division pays the shipping costs and the courier gives the receipt number as proof of delivery to the warehouse division. The courier sends the goods to the address that has been informed by the warehouse division. The warehouse division gives the receipt number to the admin, then the admin sends the receipt number to the customer as proof of ongoing delivery and waits for the delivery to arrive at the customer's hand.

4. Report Generation Process

The secretary of the food shop recapitulates sales data or files for one week. The secretary also creates a manual report that will be given to the shop owner. The business model analysis in this study is outlined in a Business Model Canvas

(BMC) which consists of elements that serve to visualize, assess, and change the business model in food stores. From BMC, there are 9 (nine) elements in the Business Model Canvas that are analyzed in accordance with the food shop case study, namely:

- A. **Value Proposition:** online sales through e-commerce websites make it easy for buyers to get product info quickly and informatively (product stock, price info, shipping info, etc.). Food prices are fairly cheap for original flavors. Good taste that has rich flavors such as spicy, salty or sweet. Each type of food has a different flavor and shape so that the composition is also different. Food stores also have a guarantee if the desired item or product does not match the expectations of the customers.
- B. **Customer Segments:** very suitable for teenagers for spicy variations but for sweet ones suitable for all ages because of the comfortable taste in the mouth. For work friends, casual friends or for watching friends, this food is very suitable to be eaten at any time and anywhere because of the packaging that is easy to carry anywhere.
- C. **Customer Relationships:** providing discount vouchers in the form of advertisements, displaying evidence or responses from consumers who have purchased products in the form of testimonials on social media. This aims to gain customer trust that the food sold has good taste and good reviews or ratings. Broadcast the latest product info on social media.
- D. **Channels:** consumers can order products through social media, events, marketplaces, and e-commerce websites that have been created.
- E. **Key Partners:** partners or parties who can help food stores are food raw material suppliers, someone who works in a food store, food bloggers, food resellers, and food communities.
- F. **Key Activities:** direct product sales, online product sales on marketplaces and social media, product procurement, product updates, product packaging, and product delivery for online

- sales.
- G. **Key Resources:** the resources needed by the store include: marketing or admin staff, computers, laptops, internet, attractive food packaging, and a unique food logo design.
 - H. **Cost Structure:** expenses from the store in the form of purchasing food raw materials, pay or salary for marketing staff, rental costs for direct sales, rental costs for advertising services from Google Ads, domain and hosting rental costs as a place for online sales, and internet costs to facilitate online business processes.
 - I. **Revenue Streams:** The food store's profits come from selling products through social media, marketplaces, and events.

After analyzing the current business processes, the design of the proposed system that will be made for the store will be described using UML, including activity diagrams, use case diagrams, and class diagrams. The following are some of the stages of designing an e-commerce website system:

1. Use case diagram is a description of all actors and use cases to analyze the interactions that occur in a system. In the master use case diagram, there are registration, login, input, edit, delete products, and categories. This use case diagram can be seen in Figure 3.
2. In the transaction use case diagram there are orders, input shipping data, confirm payment, view order details, check receipt, verify payment confirmation, order list, and input receipt number.
3. In the activity diagram of the ordering process there is an order process carried out by the customer. Customers visit the e-commerce website to see products available on the website.

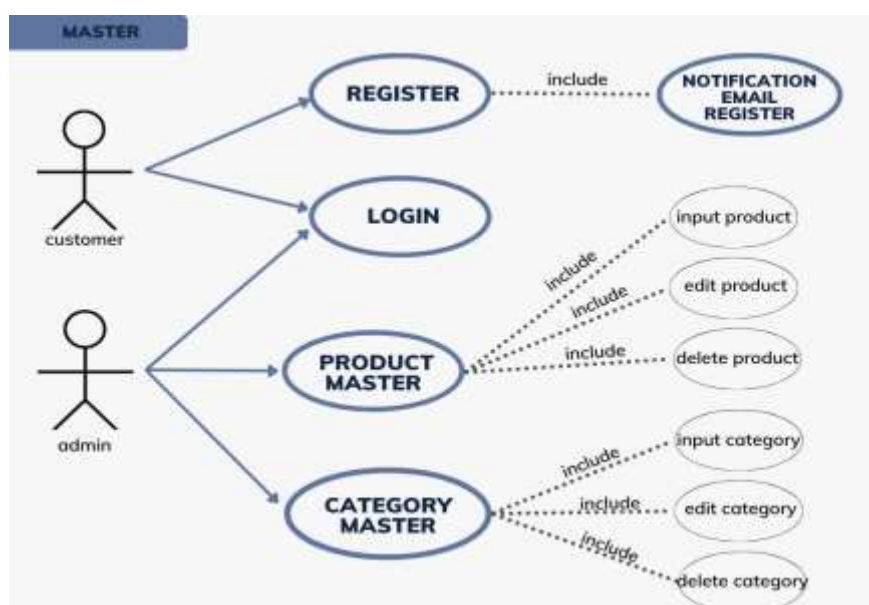


Figure 4. Use case diagram master

If the customer finds the desired product, the customer will place an order on the website. If the customer has determined the product they want to buy, the customer clicks the Proceed to Checkout button available on the View Cart page. If the customer already has an account on the website, the customer is required to log in first by clicking the My Account menu. After that, the customer fills out the form or Billing Details to find out the shipping costs for each region. If the customer does not have an account, then the customer must first create an account on the Register menu. Customers must fill in email, first name, last name, password, confirm password, then click the Sign Up button. After creating an account, the customer will choose the payment method by clicking the Place Order button and see the order details, and the store

account number, which will be paid by transfer. After the customer places an order, the customer will receive an email containing an Invoice Order from the food store e-commerce system. Admin also receives an incoming email that a purchase has occurred. Admin changes the Order status to Pending Payment on the website dashboard or back-end page of the website. If the customer does not find the desired product, the customer will leave the website and not place an order.

4. In the activity diagram of the report generation process, there is a process carried out by the admin to print the report. Admin logs in on the back-end website page, then the admin creates order reports, sales reports, payment reports, delivery reports, stock reports, and best-selling product reports which will be exported for recapitulation and given to the store owner every month.
5. In the class diagram there are relationships between one table and another. Class diagram is a relationship between classes and a detailed description of each class in the design model of a system. Class diagrams also show the rules and responsibilities of entities that determine system behavior.

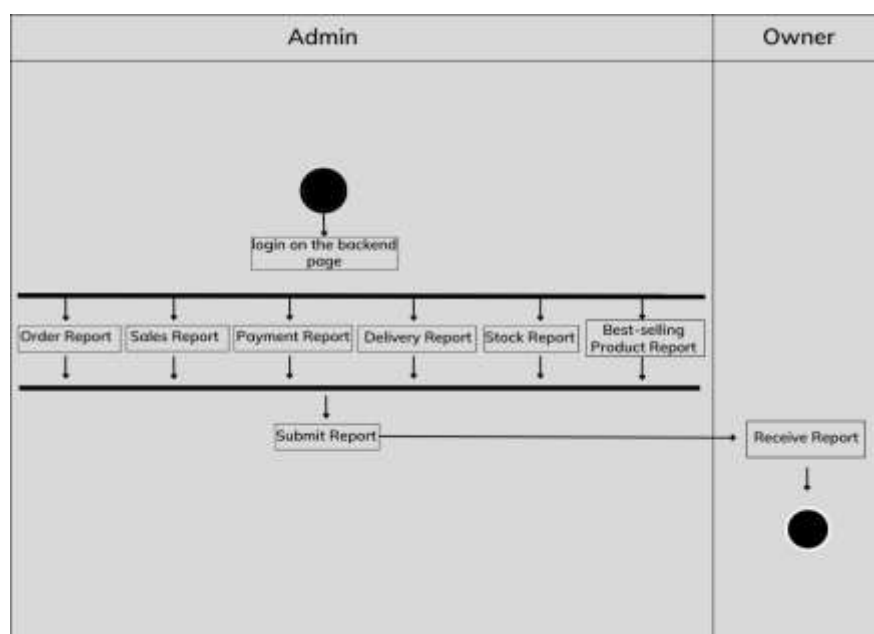


Figure 5. Order process activity diagram

6. The food store e-commerce website system built in this study, the screen display is divided into two, namely:
 - 1) Front-End Screen Display. This is the initial display of the food shop website. display when the customer logs in to the food shop website. A login pop-up appears when the customer clicks the Login menu. Which will show the display when the customer registers on the store website. A register pop-up appears when the customer clicks the Register menu.
 - 2) Back-End Screen View. Shows the display of the website's back-end page for adding products on the store's e-commerce website. Which will show the display of the website's back-end page for printing reports on the store's e-commerce website.
7. The store e-commerce website system built in this study produces several outputs as information from the system, namely:
 - 1) Booking Detail Notification: the output of the booking detail notification that goes to the customer's email.
 - 2) Sales Report: sales report output result

In the Search Engine Optimization (SEO) strategy for the implementation of e-commerce in perfume shops, only use the SEO on Page strategy. SEO on Page is an SEO technique that is focused on optimizing the internal website. This on page activity involves engineering the elements and content of a website.

8. Testing Results

After applying several steps and methods that have been carried out in the SEO strategy, there are several keywords or keywords that are optimized on each website page. Shows the search results using the Google search engine. Search results with the specified keywords. The feedback questionnaire is given to the owner or owner of the store via email. This questionnaire aims to provide feedback on the e-commerce website system created using the User Acceptance Test (UAT) method. From the results of the User Acceptance Test (UAT) test, conclusions can be drawn, namely:

- 1) System users who have chosen the answer Disagree (TS) get a score of 0%
- 2) System users who have chosen the answer Agree (S) got a score of 40%, namely 4 Agree answers from 10 questions.

Based on the results of the User Acceptance Test (UAT) assessment, it can be concluded that users or users strongly agree that the implementation of an e-commerce website system will make the sales process more effective and efficient and help reduce data recording errors and loss of information to generate report information from data stored in the database. This e-commerce website system is expected to increase online sales.

Conclusion

In designing an e-commerce sales system website at a food store in this study, it was concluded that the e-commerce website created can make it easier for customers to get product information and place orders online so as to make the sales process more efficient. This is evident from the results of the User Acceptance Test (UAT) assessment.

The e-commerce website design can help reduce data recording errors and loss of information to produce report information with data stored in the database. The information generated is valid and can help in increasing online sales. This is evident from the results of the User Acceptance Test (UAT) assessment.

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REFERENSI

- [1] Rahardja, U., Dewi, E. R., Supriati, R., Santoso, N. P. L., & Khoirunisa, A. (2022). Pengabdian Pengembangan Kurikulum Merdeka Belajar Kampus Merdeka (MBKM) Studi Teknik Informatika S1 Universitas Raharja. ADI Pengabdian Kepada Masyarakat, 3(1), 16-24.
- [2] Supriati, R., Dewi, E. R., Supriyanti, D., & Azizah, N. (2022). Implementation Framework for Merdeka Belajar Kampus Merdeka (MBKM) in Higher Education Academic Activities. IAIC Transactions on Sustainable Digital Innovation (ITSDI), 3(2), 150-161.
- [3] Septiani, N., Lutfiani, N., Oganda, F. P., Salam, R., & Devana, V. T. (2022, February). Blockchain technology in the public sector by leveraging the triumvirate of security. In 2022 International Conference on Science and Technology (ICOSTECH) (pp. 1-5). IEEE.
- [4] Mardisentosa, B., Rahardja, U., Zelina, K., Oganda, F. P., & Hardini, M. (2021, November). Sustainable learning micro-credential using blockchain for student achievement records. In 2021 Sixth International Conference on Informatics and Computing (ICIC) (pp. 1-6). IEEE.
- [5] Schultheiß, S., & Lewandowski, D. (2021). "Outside the industry, nobody knows what we do" SEO as seen by search engine optimizers and content providers. Journal of Documentation, 77(2), 542-557.

- [6] Lewandowski, D., Sünkler, S., & Yagci, N. (2021, June). The influence of search engine optimization on Google's results: A multi-dimensional approach for detecting SEO. In 13th ACM Web Science Conference 2021 (pp. 12-20).
- [7] Batiuk, T., Vysotska, V., & Lytvyn, V. (2020, April). Intelligent System for Socialization by Personal Interests on the Basis of SEO-Technologies and Methods of Machine Learning. In COLINS (pp. 1237-1250).
- [8] Hutamy, E. T., Marham, A., Alisyahbana, A. N. Q. A., Arisah, N., & Hasan, M. (2021). Analisis Penerapan Bisnis Model Canvas pada Usaha Mikro Wirausaha Generasi Z. *Jurnal Bisnis dan Pemasaran Digital*, 1(1), 1-11.
- [9] Zulkarnain, Z., Saputra, M. G., & Silvia, D. (2020). Strategi Pengembangan Bisnis Melalui Pendekatan Business Model Canvas Pada Pt Pitu Kreatif Berkah. *Journal Industrial Servicess*, 6(1), 55-61.
- [10] Brickley, D., Burgess, M., & Noy, N. (2019, May). Google Dataset Search: Building a search engine for datasets in an open Web ecosystem. In The World Wide Web Conference (pp. 1365-1375).
- [11] U. Rahardja, Q. Aini, F. P. Oganda, and V. T. Devana, "Secure Framework Based on Blockchain for E-Learning During COVID-19," in *2021 9th International Conference on Cyber and IT Service Management (CITSM)*, 2021, pp. 1–7.
- [12] Kumar, V., & Ayodeji, O. G. (2021). E-retail factors for customer activation and retention: An empirical study from Indian e-commerce customers. *Journal of Retailing and Consumer Services*, 59, 102399.
- [13] F. Agustin, F. P. Oganda, N. Lutfiani, and E. P. Harahap, "Manajemen Pembelajaran Daring Menggunakan Education Smart Courses," *Technomedia J.*, vol. 5, no. 1 Agustus, pp. 40–53, 2020.
- [14] Haribabu, S., Kumar, P. S. S., Padhy, S., Deepak, G., Santhanavijayan, A., & Kumar, N. (2019, December). A novel approach for ontology focused inter-domain personalized search based on semantic set expansion. In 2019 fifteenth international conference on information processing (ICINPRO) (pp. 1-5). IEEE.
- [15] B. Mardisentosa, U. Rahardja, K. Zelina, F. P. Oganda, and M. Hardini, "Sustainable Learning Micro-Credential using Blockchain for Student Achievement Records," in *2021 Sixth International Conference on Informatics and Computing (ICIC)*, 2021, pp. 1–6.
- [16] Yang, Y., Zhao, K., Zeng, D., & Jansen, B. J. (2020). How search engine advertising affects sales over time: An empirical investigation. *arXiv preprint arXiv:2008.06809*.
- [17] Giomelakis, D., Karypidou, C., & Veglis, A. (2019). SEO inside Newsrooms: Reports from the Field. *Future internet*, 11(12), 261.
- [18] Panchal, A., Shah, A., & Kansara, K. (2021). Digital marketing-search engine optimization (SEO) and search engine marketing (SEM). *International Research Journal of Innovations in Engineering and Technology*, 5(12), 17.
- [19] Lopezosa, C., Codina, L., Díaz-Noci, J., & Ontalba, J. A. (2020). SEO and the digital news media: From the workplace to the classroom. *Comunicar*, 28(63), 65-75.
- [20] Yang, Q., Hong, X., Wang, Z., & Zhang, H. (2021). Reserve price of risk-averse search engine in keyword auctions with advertisers' endogenous investment. *RAIRO-Operations Research*, 55(1), 231-245.
- [21] Mathur, A., Acar, G., Friedman, M. J., Lucherini, E., Mayer, J., Chetty, M., & Narayanan, A. (2019). Dark patterns at scale: Findings from a crawl of 11K shopping websites. *Proceedings of the ACM on Human-Computer Interaction*, 3(CSCW), 1-32.
- [22] Linzbach, P., Inman, J. J., & Nikolova, H. (2019). E-Commerce in a physical store: Which retailing technologies add real value?. *NIM Marketing Intelligence Review*, 11(1), 42-47.
- [23] Niham, D., Elle, L., Yuriah, A., & Alifaddin, I. (2023). Utilization of Big Data in Libraries by Using Data Mining. *International Journal of Cyber an*
- [24] Saryani, S., Choliso, N., & Nurwana, G. (2022). Design of Augmented Reality as a Promotional Media at University of Raharja. *International Journal of Cyber and IT Service Management*, 2(2), 95-103.
- [25] Yakan, S. A. (2022). Analysis of development of artificial intelligence in the game industry. *International Journal of Cyber and IT Service Management*, 2(2), 111-116.