

The Transaction Optimization Of Color Print Sales Through E-Commerce Website Based On Yii Framework On Higher Education



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Abstract

Raharja Internet Cafe as a facility in Raharja College which is provided for Personal Raharja in helping provide the need for lecture activities. Raharja Internet Cafe has a problem, namely the sales system for applying color products that consumers have to come directly to the RIC room at LV-002 at Raharja College, but Raharja Internet Cafe cannot accommodate many consumers because of the limited area. These problems are the background for the establishment of an electronic sales system (e-commerce) based on Yii framework with the aim of facilitating the sale of color print products for consumers and staff of Raharja Internet Cafe. E-commerce website at Raharja Internet Cafe is a web-based application with a structured programming concept. The e-commerce application development Shop Copy Nicky uses 4 (four) stages in accordance with the steps that exist in software development, including the stages of observation, analysis, literature study consisting of 10 (ten) literature and implementation. The conclusion of the e-commerce website development on Raharja Internet Cafe is that the website built can make it easier for consumers to make transactions, and Raharja Internet Cafe can get comprehensive and real time reports about sales data, and payment systems for consumers that are easier because using a payment system that is done online.

Keywords : E-Commerce, Print Color, Raharja Internet Cafe

1. Introduction

In the business and economic world, information technology can no longer be separated from society, almost in all aspects of life that is inseparable from information technology [1]. The technology used can support the success of a store or company. At present many shops or companies are competing to use technology to be able to advance and compete with other companies [2]. With the rapid development of the times, resulting in stores or companies must follow the development of existing technology [3]. The store or company applies an information system to improve its business and make it the most important capital in winning competition with other stores or companies [4].



Raharja Internet Cafe (RIC) as a facility in Raharja College which is provided for Personal Raharja in helping provide the need for lecture activities [5]. Requirement provided in Prog Internet Cafe is like installing iOS, upgrades, iPad and Laptop Accessories, as well as provide service iPad and laptops, as well as several other needs. Raharja Internet Cafe provides a comfortable and safe room by facilitating Raharja College Students in scanning, printing and Student Information Systems (SIS) [6-8].

Consumers are required to come to Raharja Internet Cafe to order color print products while Raharja Internet Cafe cannot benefit many consumers because of the limited area. From the problems described, it can be concluded that Raharja Internet Cafe needs a solution to overcome existing problems. The use of the internet especially web applications called e-commerce commerce (e-commerce) based on Yii framework can help customers to make transactions and find out information about existing color print products without having to come to Raharja Internet Cafe [9]. Everyone can access Raharja Internet Cafe's website directly from home or office [10].

2. Research Method

2.1 Literature Review

The following is 10 (ten) scientific literature are used as references in this study [14] :

1. Research conducted by Aminudin (2014), entitled "Implementation of *Single Sign On* (SSO) to Support E-Commerce Application Interactivity use you right OAuth Protocol". This study discusses *Single Sign On* technology which is a technology that is in demand, especially in very large and heterogeneous networks (in the current operating system and applications used by computers originating from many vendors are asked to fill in the information themselves to each different platform to be accessed by users). By using SSO, users only have to try to authenticate only once to get permission, access to all services that are available on the network [15].
2. Research conducted by Ragil Widiharso, from ITS (Institute Technology Ten November) in 2009 with the title "Analysis of the Implementation of *Single Sign On* On *Learning Management System* and *Internet Protocol System Television*" This study describes the use of other technologies to support the *Learning Management System* (LMS). Use the SSO system to give users permission to access multiple applications at once without having to log in repeatedly. The SSO method that supports libraries from clients for PHP, the programming language used to create web based IPTV [16].
3. The research conducted by Gilang Ramadhan, from Bina Darma University in 2012 with the title "Single Sign On (SS O) Technology Analyst with the Implementation of Central Authentication Service (CAS) at Bina Darma University" This research describes how to integrate and give permission to access some web applications are centralized on the system using an Single Sign On (SSO) technology [17].
4. Indahni, Frisilia and Kunang, Yesi Novaria and Muzakir, Ari (2015), this study entitled "SSO Security System on SAML-Based Communication Path Using Digital Signature" Single sign on is a technology that allows users to authenticate on several web applications using only one *username* and one *password* . Users only need to log in once to be able to access several integrated web applications. Single sign on provides a Security Assertion Markup Language (SAML) facility as a connecting portal between

users and web applications. By using several web applications, namely moodle and wordpress. The SAML SSO uses a digital signature as a security system between servers using the SP certificate, Idp certificate and CAS certificate. Digital signature has a function as a marker on data that ensures that the data is the actual data (nothing has changed) using the RSA algorithm [18].

5. The research conducted by Manisha Bhardwaj, Sarbjeet Singh and Makhan Singh in 2011 was titled "Implementation of Single Sign-On and Delegation Mechanisms in Alchemi. Net Based Grid Computing Framework". The study was based on elaboration after analyzing the detailed performance of Alchemi, identifying that Alchemi was based. The NET Grid Computing Framework does not support mechanisms such as single sign-on, so it is desirable to add this mechanism to improve its usability and application. Single sign-on (SSO) is a desirable feature of grid computing, although there are several ways to implement single sign-on and delegation, but in this study it was implemented at Alchemi.Net based on a grid computing framework through X.509 proxy certificates. Then currently there has been applied a single sign-on and delegation mechanism for Alchemi.Netbased by utilizing X.509 proxy certificates. In this implementation communication was formed between two host. Then the host acting as the client has been confirmed by the host acting as the server. After being authenticated, clients are allowed to access various applications provided by Alchemi. Computerized grid based netbased framework with single sign-on and full delegation rights [19].
6. Research conducted by Mahdi Choshin and Ali Ghaffari from the Institute of Mizan and Islamic Azad University in 2016, entitled " *An Investigation of the Impact of Effective Factors on the Success of E-Commerce in Small-and Medium-Sized Companies* ". This study discusses the strategies of companies and organizations in capturing and mastering buyers so that they can survive in the world of commerce. One precise strategy is to use *e-commerce*, which can be used in marketing, sales and services *online*, giving a significant role in identifying, acquiring and retaining buyers. However, in *e-commerce* there are many factors inside and outside the organization that affect success. After the experiment, the results showed that what gave a significant influence on the success of *e-commerce* was buyer satisfaction, total costs, infrastructure, knowledge and information[20].
7. Research conducted by Nasrin Rasouli, Lela Abedi and Sara Ghaei from the Islamic Azad University and Computer Group in 2018, with the title "*Designing Agents for Information Extraction from Persian E-Shops*". In this study, the researchers discussed *E-shops*, which is one of the conventional applications of *e-commerce* or electronic commerce. To find the desired product, a buyer must write the right *keyword* in the search column. However, often the product that appears does not match what you are looking for, such as product forms that are not the same and different product descriptions on each *website*. Constraints in the search for this product cause buyers difficulties in the search process. So from that, a *software* is made that can extract product information, displayed in a table that buyers can use to compare the price and condition of the seller without having to spend much time looking for it [21].
8. Research conducted by Untung Rahardja, Qurotul Aini and Desi Sartika from Raharja College in 2014, with the title "*Build a Business to Online Customer Store Using Airzone Content Management System*". This study discusses the progress of technology and information in the world of commerce, which is required to be able to provide services to sell goods and services quickly in accordance with buyer demand. In the business world, *online* sites have provided buying and selling services with *online* transactions better known as *e-commerce*. Airzone is one form of a system that uses *e-commerce*, as a medium for doing business using the internet with the

- Business to Consumer (B2C)* methodology. Airzone can also be used as a means for developing *online* transactions , product promotion and *after sales support* [22].
9. Research conducted by Wei-Tsong Wang, Yi-Shun Wang and En-Ru Liu from the National Cheng Kung University and National Changhua University of Education in 2016, entitled "*The Stickiness Intention of Group Buying Websites: The Integration of the Commitment-Trust Theory and E-Commerce Success Model*". In this study, researchers discussed the relationship between buyers and *Group-Buying Websites* , which is the key to the success of *Consumer to Business (C2B)*. *Group-Buying Websites* are a system of purchases that are done collectively, so that buyers and sellers get the benefits, such as discount *vouchers* for buyers, and sellers can sell many of their goods effectively. By integrating the success of *e-commerce* models and trust-commitment theory , it was found that the relationship between commitment, trust and satisfaction is the main determinant of *stickiness intention*, a model of *Group Buying Websites* developed by researchers [23].
 10. The research was conducted by Untung Rahardja, Eka Purnama Harahap and Ririn Eka Cipta Devi from Raharja College in 2018, with the title "The Influence of Services and Facilities on Internet Cafe Services for Lecture Activities at Higher Education". This study discusses the quality of Raharja Internet Cafe, a place in Raharja College that provides various facilities to meet student needs. Raharja Internet Cafe has a website with an *e-commerce* system that can be accessed anytime and anywhere, serves as a media information viewer and facilitates the transaction process. To put data on the quality of service at Raharja Internet Cafe, 30 (thirty) visitors to Raharja Internet Cafe were given an *online* questionnaire , and the average benefit *section* was 85.42%. So that it can be concluded that Rahar if Internet Cafe is very influential and provides quite a lot of benefits for student lecture activities [24].

Of the 10 (ten) existing library studies, there has been a lot of research on the use of e-commerce and SSO websites (*Single Sign On*), with this method it can make it easier for users to log in to be able to attend services on Yii framework-based websites.

2.2 Method

In this study there are 4 (four) stages used [11], namely as follows:



Figure 2. Research method

Information:

1. This observation or observation method is done directly to see the system directly running before at Raharja Internet Cafe.
2. The analytical method, after making further observations is to analyze the color print sales system at Raharja Internet Cafe (RIC), and after being analyzed it turns out it is still running offline , so the transaction process is still not optimal.
3. Met ode literature. Many previous studies have been conducted regarding the discussion of the utilization of e-commerce websites. In research on the use of e-commerce websites This literature study is needed as one of the application of research methods which will also be used as reference material to strengthen the results of the research.

4. Implementation. In this study, an implementation has been carried out by implementing an e-commerce website on Raharja Internet Cafe as a media for reporting information and sales transactions for color printed goods.

One method used to overcome the problem is by controlling the Raharja Internet Cafe website, so that buyers and sellers can make transactions without constraints [12]. Maintenance of the website by the admin should add up-to-date information must also be done, thus communication errors between the seller and the buyer can be avoided. As a result, the transaction process that has the necessary support and smooth trading can run as expected [13].



Figure 3. *Mind map* of color print products at Raharja Internet Cafe

Figure 3 is a mind map display that explains about color print products on the Raharja Internet Cafe website, which consists of: (1) Explanation: as the development of print sales for students at Raharja College. (2) Excellence: product information can be conveyed effectively and efficiently, and the transaction process becomes easier. (3) Function: makes it easy for sellers and buyers to buy and sell color prints. (4) Parties involved: top management, secretaries and employees. (5) Login: SSO (Single Sign On).

After examining the problems in the system of selling color print products that are running, then the process flow of buying color print products using the e-commerce website Raharja Internet Cafe performed by end-users is depicted in the following flowchart :

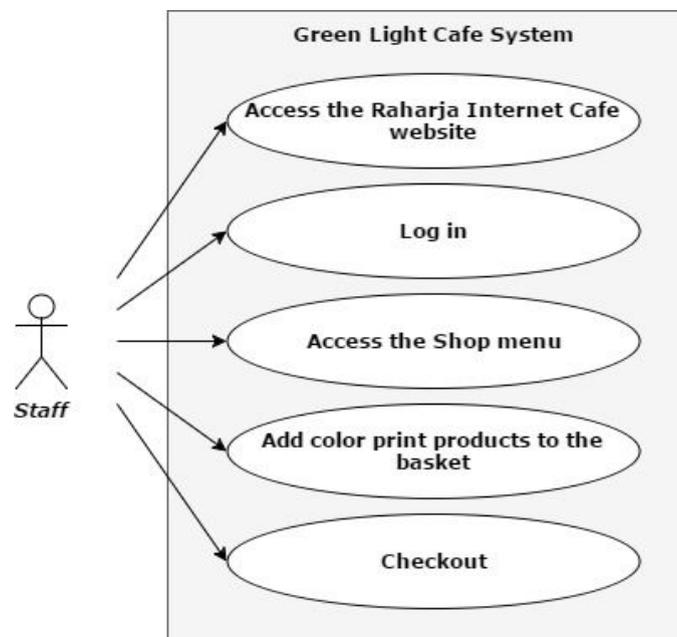


Figure 4. *Flowchart* buys color print products

In Figure 4, it explains about 5 (five) sales data input processes, which are carried out by Green Light Cafe staff using the Green Light Cafe website system , namely: (1) End-users access the Raharja Internet Cafe website . (2) End-user log in. (3) End-users access the Shop menu on the Raharja Internet Cafe website . (4) End-users add color print products to the basket. (5) End-users checkout their ordered orders.

3. Findings

The electronic media needed to access the Raharja Internet Cafe website is not limited to the Personal Computer , various electronic media such as notebooks , laptops, tablets and mobile phones can be used to access, if accompanied by support from a good internet connection. In addition, adding from the Raharja Internet Cafe website that is neatly arranged and comfortable to see will have a positive impact on end-users who come to visit. The following are 4 (four) images from screenshots of the Raharja Internet Cafe website taken using notebook media.

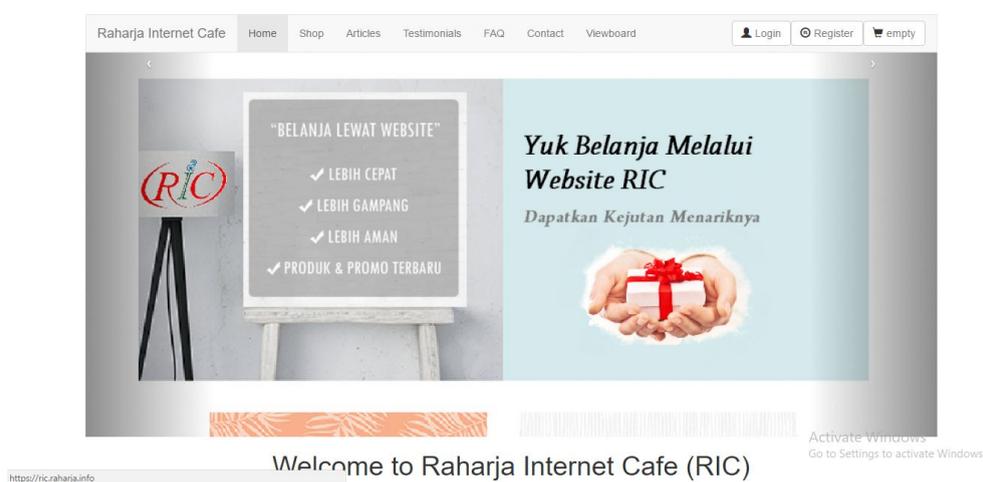


Figure 5. Raharja Internet Cafe's *website homepage*

Seen in Figure 5, the interface of the homepage or main page of the Raharja Internet Cafe website. At the top, there are 7 (seven) menus, namely home, shop, articles, testimonials, FAQ, contact and viewboard. The log in, register and check out menus are also located at the top right. In addition there is also a banner that informs about interesting news from the Raharja Internet Cafe website, 5 (five) top products that are often purchased by buyers, and some photos from the situation that occurred at Raharja Cafe located in the L-002 room of the Raharja College.

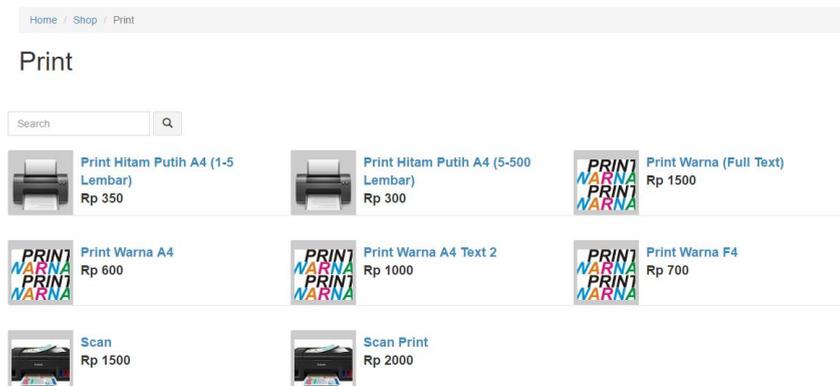


Figure 6. List of products

Then as seen in Figure 6, it is a display of the print product list. There are 8 (eight) products, namely A4 black and white print (1-5 sheets), A4 black and white print (5-500 sheets), color print (full text), A4 color print, print color a4 text 2, f4 color print, scan and print print along with the price. Based on this page the buyer can choose the product you want to order.

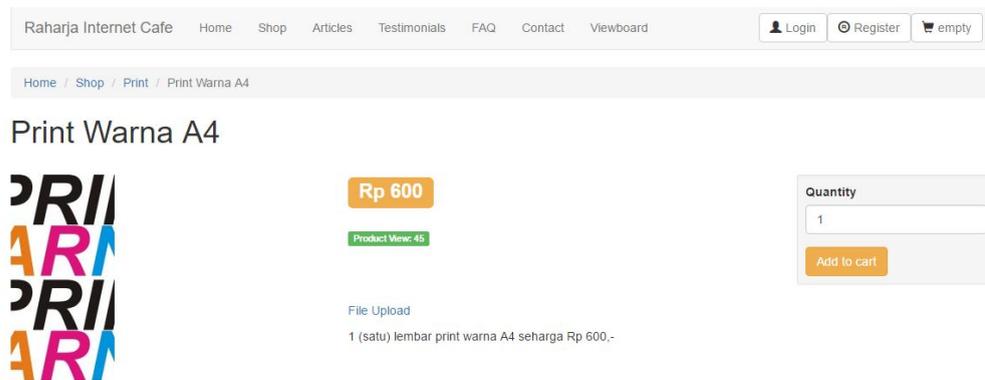


Figure 7. Color print products with their descriptions

Next is Figure 7, product descriptions such as sample, price and details are displayed as important information for the buyer. With this product description, the seller does not need to explain the product repeatedly to many interested in color print products.

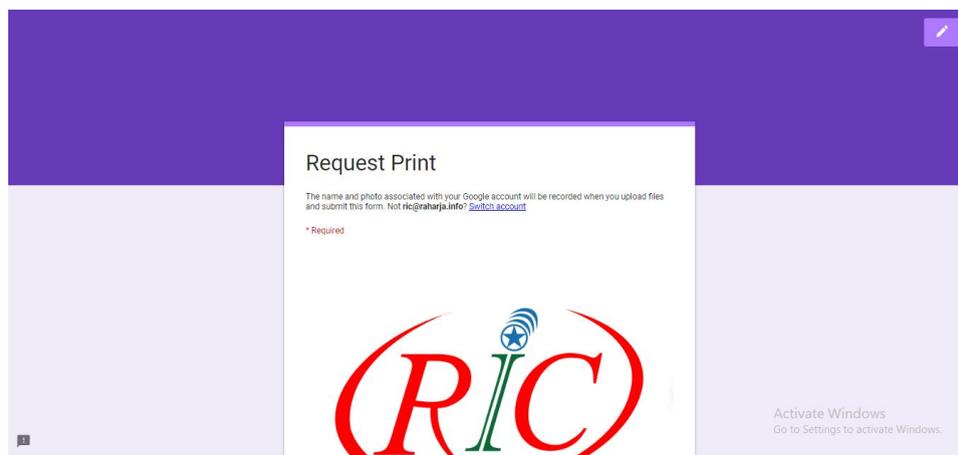


Figure 8. Order form

And the last one is Figure 8, an *interface* from an *online* form is displayed that is used by sellers to collect important data from buyers. With this form, the buyer can inform the wishes of the print order effectively and efficiently [25]. Because of the existence of this form, the buyer does not need to bother to explain the print output he wants.

4. Conclusion

It can be concluded that the e-commerce system can help Raharja Internet Cafe in developing its business. Color print products sold online, aside from making it easier for sellers and buyers, can also develop the Raharja Internet Cafe website, which previously never sold print products online . Then, with the availability of color products on the Raharja Internet Cafe website, if banners or articles are made eye catching and informative, it will attract buyers. Because of the ease of transactions caused by technological advances, distance is no longer a meaningful sacrifice. Information about color print products can be found easily in your hand. Then with the use of online forms , the informative order data can be received by the

seller neatly and easily. Man's mistakes in ordering can be minimized because the online form has presented clear questions, requiring the buyer to fill them out clearly too. The advice given for the progress of this research is that it is necessary to develop a type of product. In addition, the promotion of color print products on the Raharja Internet Cafe website also needs to be expanded, so that buyers can get more and Raharja Internet Cafe can continue and develop.

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