Implementation of Information Technology as an Advertising Media

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Abstract. This study attempts to utilize the role of information technology in globalization era as a media of advertisement. This journal used descriptive analytics method which analysed several e-commerce case studies in Indonesia. Data collection techniques used are observations in which data are collected systematically about the events or facts. The result of this research is information technology in the form of internet can be said very effective for advertisement publication and save profit. The results of this study are expected to be a literature or reference for entrepreneurs who are running their business in order to take advantage of the role of information technology, especially e-commerce in marketing their products.

1. Introduction
A growing of IT industry made many companies used Internet as their mediators on advertising platform to control over the promotion materials and it possess greater reliability and flexibility. Internet also becoming an important stop point for customers in finding their needs and wants. [1 -2]. The Internet is a global communication medium that is increasingly being used worldwide as an innovative tool for marketing goods and services [3]. So, the best tool in building relationships with customers, and can increase the popularity of the brand of business products offered because the community is aware of the products offered. [4-5]. Oxley and Yeung reported that a systematic cross-country analysis of e-commerce activity reveals that although physical infrastructure explains much of the variation in basic Internet use, e-commerce activity also depends significantly on a supportive institutional environment. Chief among the characteristics of such an environment are national respect for the “rule of law” and, secondarily, the availability of credible payment channels such as credit cards.[6]

Javan et al. explained that in selecting advertising media there is a process of analyzing and selecting the most cost-effective media for advertising campaigns and promotions because people are aware of the products offered. [6]. Aizawa and Kim elaborated that advertising is effective to attract an individual's interest in a product. [7] Research conducted found that advertising media play a role in increasing consumer purchases, so that appropriate advertising method is needed to attract the attention of consumers resulting in increased market share. [8] Nguyen et al. through his research into two brands paired with various categories explained that today many companies are competing in terms of advertising online so that their products can be seen and remembered by consumers. [9] While research conducted by Bigne et al. said that the online advertising media will affect consumer intentions in the purchase in the future about the products offered. [10]

From the above information much discussed about advertising in the internet media, but there is no internet implementation as an advertising medium. Therefore, this study provides the implementation of the internet in advertising media, and also the advertising done should be designed in such a way as
to appeal to the internet users. This research uses descriptive analysis method using multiple case studies of e-commerce in Indonesia. Data collection techniques used are observations of systematic data collection of events or facts that exist. The results of this study is expected to be a literature or reference for entrepreneurs who are running their business in order to take advantage of the role of information technology, especially e-commerce in marketing their products.

2. Method
This research used descriptive analysis method using case study of several e-commerce in Indonesia. Data collection techniques used are observations in which data are collected systematically about the events or facts. By using the method of observation, the data obtained is the latest data from the facts, and the data obtained is more objective because it closes the possibility of data manipulation.

3. Results and Discussion
With the implementation of information technology, advertising publications are much easier and cheaper than conventional advertising publications, this is because advertising publications through online media is much cheaper than other media such as tv, poster, and so on. Benefits that can be obtained from advertising in online media is of course free, on this online media, business actors can install their products for free for limited features. Compared to TV media this is obviously much more profitable because it can save advertising budgets significantly. Ease of use of e-commerce is also a guarantee for the perpetrators of the business. The buyers and sellers can access the product every second and everywhere only through the gadgets they used. This is certainly an attraction for consumers because it can save their costs to come buy products that they are interested in, and save time looking for products they will buy.

E-commerce reaches very wide, when the store physical sales only limited to the nearest area alone, e-commerce can display ads globally. This online store is not geographically restricted. As long as connected to the internet, then the product can be aired and purchased anywhere so that the sales scope is also higher. To make a product better, it certainly requires an objective assessment of the buyer. E-commerce also supports this feature with review & rating system. This makes the sellers improve the quality of their products and make buyers more interested in buying the product. Because the assessment of the buyer can be seen by the public and give consideration before buying the product (See Figure 1)

![Rating System in Tokopedia](image_url)

Figure 1. Rating System in Tokopedia
Therefore, of the many features provided in e-commerce certainly adds satisfaction to the buyer so, seller even more guarantee to put the product ad in e-commerce. So that e-commerce users are increasing in the period so fast. The level of satisfaction was measured between conventional stores with online stores because buyers prefer the practicality in shopping (See Figure 2).

![Customer Satisfaction with E-Commerce, Retail Trade](image)

**Figure 2.** Level of satisfaction of *E-Commerce*.

With the data above, the development of information technology can affect consumer interest to shop through online media than conventional retail stores. Furthermore, making the online media more often profitable is from the lifestyle of humans who are now more often using gadgets every day. Of course this is influenced by the implementation of the rapid development of information technology lately. When the Internet used more often used through computers, so now the internet is more often used through gadgets every day. (See Figure 3).

![Internet Usage Worldwide](image)

**Figure 3.** Use of Internet based on the device used.

In fact, humans can spend a full day focused on the gadget used. With that fact, came Google AdSense. Google AdSense is different from e-commerce, this technology is a technology made by Google that provides space to promote the company on applications, websites, and any site for it is supported by AdSense. AdSense is also a lot of enthusiasts because in addition to profitable business is even profitable for application designers. AdSense will appear in the spot provided by the owner of the application (See Figure 4).
Of course this is very supportive of human lifestyle that has been described previously that where humans use gadgets with a very high frequency. With that, ads can show up whenever a gadget user accesses an app that supports AdSense so that it becomes a good and strategic prospect for installing online advertising media. As we know, humans need psychological satisfaction for their own personal. They do this by playing things related to multimedia. The development of information technology has also created new innovations as a means of multimedia using internet connection. We call YouTube, YouTube is one video sharing site that can accommodate clips from anyone and publish them online. In addition to the application, AdSense also includes YouTube as a means of publishing ads. And the ads displayed vary greatly depending on what video we show (See Figure 5).
It can be seen that the advertisement shown is Tokopedia advertisement which is one of e-commerce in Indonesia and back again, it also expands the buyer's chance to buy a product when watching one of the videos that appear on AdSense. Ads on YouTube are similar to those of typical app ads, i.e. video owners will receive monetization earnings from videos that have ads installed. So ads on YouTube can also be useful for advertisers and video publishers. Another ad is an advertisement on a web page, the web owner will receive a payment from the product owner if anyone wants to place an ad on his web page. Payments received by web owners were assessed based on SEO. That is the frequency of internet users access the website on a daily basis. The more often people access the X website, of course the value of SEO X-website will also increase. When the SEO ranking is high, the higher the advertiser's interest to put an ad on the web page because many people also see the ad. If many people see the ad, of course the higher the people to access or open the ad page and see or even buy the product in the ad. Of course this is very strategic for product owners and consider to advertise on web pages that have high SEO ranking (See Figure 6).

Figure 6. SEO Ranking Indonesia.

However, the advertising tariff is usually higher than the X website which has a higher ranking of more expensive ad publishing rates than the websites whose rankings are below. In addition to AdSense & e-commerce other advertising media and follow the development of information technology is social media. Social media is a site that connects users of accounts to other accounts in a massive manner. It is also used by product owners to share information about their products to the people so that many people know the product. Until now, social-media sites have developed their sites to support advertising products like Facebook Ads, Sponsored Instagram, and more. Like AdSense, these two features also adjust the contents of ads with what we are interested in through any site or web that we have access before (See Figure 7).
These ads will appear when scrolling on our social media will appear randomly advertised, and adjust to our interests based on the sites we access. Not only that, many business people who create accounts that are devoted to promoting their products through social media, and even eat social media as a media purchase (See Figure 8).

![Figure 8. Instagram Sponsored.](image)

Marketing through social media is also not much different from e-commerce in general. But different here is social media using a special account to promote its products and no special features for complaints. However, despite this, many ad publications are still interested in using this social media because it is so easily accessible to anyone. In addition, social media also invites sellers and buyers to interact about the product well so that the purchase interest is higher (See Figure 9).

![Figure 9. Sellers on Instagram.](image)

4. Conclusion
The conclusion of this research is information technology in the form of internet can be said very effective for advertisement publication and save profit. In addition, online media publications can adapt to today's human lifestyle so that advertisement publications are well targeted and increase the likelihood of buyers to be interested in existing products in advertising. This online medium also provides this publication for free so that business owners can use technological developments this information to save profit without having to reduce market share.
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