






# The Effectiveness of Using E-commerce Media in Improving Students' Understanding of Basic Economic Principles

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**Abstract.** Students towards understanding the basic principles of economics. The rise of e-commerce is undoubtedly a big challenge for the world of education, especially in providing understanding for students as the millennial generation in utilizing the e-commerce media. E-commerce has now become a millennial market that offers easy access to the distribution of economic activities. This research is an experiment using E-Commerce media by teachers for students learning to understand economic principles. Learning by utilizing e-commerce media is carried out in class VIII of SMPN 3 Banyuresmi. The results showed that before using e-commerce, students' understanding of economic principles was relatively low, with an average mark of only 65. In contrast, after the teacher used e-commerce media, there was an increase in understanding to an average of 78, meaning a significant increase of around 13 points. Therefore, using e-commerce media and e-business is beneficial for students in understanding the current millennial economic activities.

**Keywords:** e-commerce media · student understanding · basic economic principles

## 1 Introduction

Changes in the behavior of the community's economic system to meet the needs of life with e-commerce. One of the reasons is the ease of doing transactions offered by e-commerce. In addition, the rapid development of e-commerce in Indonesia is also influenced by the lifestyle of the Millennials, who prefer to shop online. The concept of e-commerce or electronic commerce was developed to facilitate business transactions using the internet and website technology. The large population of Indonesia is a significant market opportunity for industry players. This is indicated by the 30 million Indonesian population who are consumers and e-commerce players [1]. Economic progress is one of the development goals representing society's welfare. The economic perspective tends to dominate the way of thinking about the definition of development and welfare.

Based on the ease of doing transactions offered by e-commerce. In addition, the rapid development of e-commerce in Indonesia is also influenced by the lifestyle of Millennials, who prefer to shop online. So E-Commerce is buying and selling services or products between two parties via the internet [2]. In this era, humans will become objects of innovation, where technology and information will be equipped with big data processing and artificial intelligence to facilitate every human need. One of the most significant impacts is changes in social and economic behavior. The development of e-commerce, in addition to offering various conveniences, has a negative impact. Transaction systems that do not allow a meeting between sellers and buyers can lead to different perceptions of risk for each person. In addition, the incompatibility of the image with the goods received sometimes creates a sense of dissatisfaction with the buyer.

The phenomenon of economic development is also a cultural process because the economy itself is part of the cultural reality that can shape urban development in Indonesia, which can foster a culture of consumerism for its people when urban economic development focuses more on the cultural reality, thus affecting the current system of Indonesia's economic existence. Has been dissolved in global economic conditions, and this greatly affects the Indonesian economy if there is an increase or decrease in global economic conditions. One of them is the development of e-commerce in Indonesia, which development can show in 2020 with e-commerce services of up to 36%. To a great extent, people use these media for e-commerce or business purposes [3]. E-commerce media as a form of digital and global economic system development.

Thus the development of e-commerce, in addition to offering various kinds of convenience, has a negative impact. Transaction system which does not allow a meeting between the seller and the buyer can lead to different perceptions of risk in each person. So e-commerce media can have a less-than-optimal impact and risk if its use is not wise and is not in accordance with the rules.

#### a. Effective Use of E-Commerce Media

The development of e-commerce, in addition to offering various conveniences, has a negative impact. Transaction systems that do not allow a meeting between sellers and buyers can lead to different perceptions of risk for each person. E-commerce related to economic action is a human action driven by an effort to fulfill a physical need to achieve economic well-being, taking into account the needs and desires or sacrifices and results and being able to make the right choice in meeting a need needed. Which one should be prioritized with the desire for humans in an activity of their life is enjoying life? A person's desire to earn income, then part of his income is used to help others sincerely and sincerely. Example: giving alms to the poor, donating to areas affected by a disaster. One of the challenges that need to be faced by all elements of society is through socialization related to social entrepreneurship, so if there is socialization from the community, the development of social entrepreneurship will develop significantly [4].

E-commerce media is an electronic business mechanism focused on individual-based business transactions using the internet to exchange goods or services between agencies or individuals with agencies [5]. So e-commerce media can be used for information

technology to facilitate the digital economy in four core services to help execute business strategies: business process automation, providing information, connecting with customers, and productivity tools. Based on this, needs are differentiated and met by providing the necessary products and services in adequate quantities to the people who need them when they need them and where everyone can receive high-quality services and their lives [6]. Entrepreneurship course in each university is set up as independent or compulsory course whose objective is to increase the competitive value of the targeted materials. Based on the concept of e-commerce that creates entrepreneurship globally in the context of materials with effective value targets.

#### b. Understanding the Basic Principles of Economics in Students

Understanding the basic principles of economics, students are expected to have an understanding and mastery of basic economic concepts or what is called economical literacy. According to the NCEE, economic literacy is a condition that describes a person being able to understand fundamental economic problems well so they can carry out economic activities properly [7]. So economic literacy is one of the indicators of competence in economic knowledge that affects life in all fields. So the concept is essential for humans because it is used in communication with others, thinking, learning, reading, and others. Without concepts, learning will be very hampered [8]. Only with the help of concepts can formal education be carried out. If students have good basic knowledge of economics, their economic behavior will be better. Thus their consumption behavior patterns will be more rational, for example, in spending their daily pocket money.

The concept of economic principles shows that human needs are unlimited, while the means of satisfying needs are limited or scarce. Therefore, throughout his life, humans must always think, try, and choose to be able to make rational decisions in their economic activities. Economics subjects function to equip students with basic knowledge and skills to make rational decisions about economic actions in various choices [9]. So that students whose learning outcomes in Economics are good can also determine their consumption actions based on rational considerations. Understanding the basic principles of economics can influence the pattern of students' economic activities. Strengthening the understanding of basic economic principles can be a support and can significantly influence the economic system in the lives of students as economic actors.

## 2 Methods

The research method is an essential step in conducting research, so it becomes an element researchers need to explain the purpose of the research. The research method approach used is quantitative. The research method with a quantitative approach is a research method based on positive philosophy, used to examine certain populations or samples where in the process of collecting data using research instruments using statistics [10]. This type of research is Quasi-Experimental Design (quasi-experimental). Quasi Experimental Design. The research design used is the Nonequivalent Control Group Design. Where through this design, there is a pre-test before being given treatment, then given a post-test after being given treatment.

The location of research was carried out at SMPN 3 Banyuresmi, Jl. Cibuyutan RW. 06/RT. 03 Sukalaksana Village, Garut Regency, West Java Province. The time of the

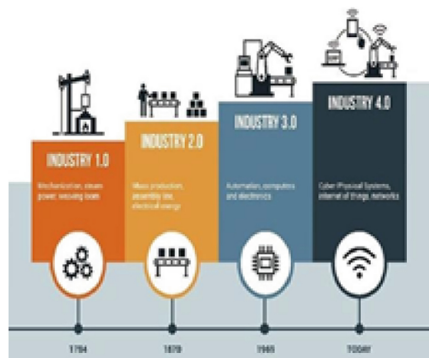
research is 2022. The population of this research is junior high school students. The sampling technique used is purposive sampling (Purposive or Judgmental Sampling), in which researchers take samples based on special selection. Then the sample is a part of the research subject used as the object of research, the sample in the study is class VIII D as the experimental class and class VIII E as the dick class. The data collection technique carried out by the researcher was test and non-test, through test techniques with pre-test and post-test and non-test through observation, interviews, and documentation studies. Then the data analysis technique is through validity, reliability, normality, homogeneity, and normalized N gain tests.

### 3 Results and Discussion

Based on the results of the research that has been carried out. Based on the results of the research conducted at SMPN 3 Banyuresmi, the researchers obtained data from the pre-test and post-test results conducted in the experimental and control classes. In general, the pre-test is an ability test given to students before being given treatment, while the post-test is done after students receive treatment; these two tests have a role in measuring the effectiveness of e-commerce media in improving students' understanding of economic learning (Fig. 1).

Based on the picture, the situation and conditions at the time of the research were still in adaptation after the Covid-19 pandemic. Therefore, the research subject from the original 69 students only obtained 64 students who provided complete data according to research needs. 5 students were not included due to illness and permission, so they did not take part in the face-to-face learning process in class. The research subjects were divided into 2 consisting of 32 students as the experimental group and 32 as the control group. Both groups were given pre-test and post-test to determine the increase in students' understanding of learning economic principles. Based on the results of the pre-test and the results of the post-test, data as shown in Table 1 were obtained.

Based on the hypothesis test (t-test) results, the aim is to determine the increase in the score so that it can be identified whether or not there is a significant increase in



**Fig. 1.** Experiment Class and Control Class. Source: Research Results at SMPN 3 Banyuresmi, 2022

**Table 1.** Research Result Data

Information	Re Test	Post Test	Re Test	Post Test
Total Students	32	32	32	32
Ideal Value	100	100	100	100
Biggest Value	90	100	76	87
Least Value	30	80	20	55
Average	49.84	85.06	46.68	75.18

Source: Research Results, 2022

accordance with the predetermined hypothesis. So through hypothesis testing, it can be identified related to improvements seen when research has been carried out. Based on the formulation of the hypothesis that can be tested statistically in this study are:

Based on the conclusion criteria from the hypothetical t-test, it can be seen that if the t-count value is greater than the t-table or the significance value is less than 0.05, then  $H_a$  is accepted, which means that there is a significant difference between the post-test results of the experimental group and the control group. Then if the t-count value is smaller than the t-table, or the significance value is greater than 0.05, it can be concluded that  $H_a$  is rejected and  $H_0$  is accepted so that there is no significant difference between the post-test results of the experimental group and the control group. The results of the hypothesis t-test can be presented in Table 2.

Table 2 shows the results of the hypothesis testing analysis, with the t-test showing that the t-count value is 6.812024 and the significance value is 0.0289. So it can be concluded that the significance value is less than 0.05. Thus, e-commerce media effectively

**Table 2.** Hypothesis T-Test Results

	86	70
Mean	79.78947368	70.26315789
Variance	8.064327485	29.09356725
Observations	19	19
Pooled Variance	18.57894737	
Hypothesized Mean Difference	0	
df	36	
t Stat	6.812024862	
P(T <= t) one-tail	0.0289982E-08	
t Critical one-tail	1.688297714	
P(T <= t) one-tail	5.79964E-08	
t Critical one-tail	2.028094001	

Source: 2022 Data Processing Results (Microsoft Excel 2010)

increases the understanding of basic economic principles in class VIII students at SMPN 3 Banyuwesmi.

Furthermore, to measure the increase, the Normalized Gain N test was carried out to show the increased results from the research objectives. So that the level of increase or decrease in research activities can be identified through the Normalized N Gain test, then the difference in the increase from the results of research that has been carried out can be identified. The results of the N Gain test can be presented. It can be identified the results of the N Gain test as one of the data analysis tests to see an increase in understanding of the basic principles of economics, which can be seen from the learning outcomes and activities of the student learning process while in class after students are given treatment. Thus, it can be seen that the average student has increased compared to before being given treatment. The increase in these results can be seen from the number of students' scores on the pre-test, namely 1.315, and after the post-test, 1.602, which has increased, which is in the medium classification.

The development of e-commerce in the era of the industrial revolution 4.0 aims to create a community centered on man in which the development economy and solution challenge society are achieved, and people can enjoy a high quality of life fully active and comfortable. This society will be present in personal details for the various needs of people, regardless of region, age, gender, or language, providing needed goods and services. Key from the realization is a combination of cyberspace and the real world (physical space) to generate quality data and, from there, create value and new solutions for the complete challenge [11]. So e-commerce Economic action is a human action that is driven by an effort to fulfill a physical need to achieve economic well-being, taking into account the needs and desires so that a basic understanding is needed that is applied to students about the economic system (Fig. 2).

Based on the picture, the development of e-commerce is no escape from the role of technology development and change behavior Public in meeting the needs of life. There is 5 e-commerce classification, namely [12]:

1. Advertisement line

A model business in the form of an advertisement line shown in media is only suitable for perpetrator businesses that want to make sales indirectly and continuously.

2. Marketplace C2C (customer to customer)



**Fig. 2.** Development era Revolution Industry

A model business that brings together Among customers with a customer with an existing role from a party third or often called escrow.

### 3. Shopping mall

Model business only applies to perpetrator business with brand famous just

### 4. Shop on line B2C (business to customer)

Model this business very simply, with only existing seller which promotes their wares through the website da sell it yourself online.

### 5. Shop online media, social

Model businesses utilize role social Becomes media to promote a product.

Understanding the basic principles of economics can play a role in knowing about e-commerce. Currently, e-commerce is growing fast in Indonesia for various needs, such as fashion, services, transportation, food, etc. Industrial Revolution 4.0 and Society5.0 to changes in the behavior of the economic community [13]. With the technological development of e-commerce, the Public no longer needs to work hard to do transactions. Welcoming the Industrial Revolution 4.0 and Society 5.0. World education is wrong. One knowledgeable printer generation must adapt development with given learning [14]. With these adjustments, Indonesia will continue to adapt to existing developments because professionals support them.

The problem of poverty and social inequality is a major problems in national development [15]. Based on this, students' understanding needs to be applied to include Indonesia as a developing country. The continuing growth of the electronic system (eCommerce) gives new experiences to entrepreneurs today by which they are provided with fast, precise, and accurate information about businesses. E-commerce, to a great extent, helps many business people in making purchases, sales, online marketing, distribution, and services [16]. The development of information and technology, which has become more sophisticated daily, affects global business, including electronic trading or e-commerce [17].

The entrepreneurial motivation of the Social Science students at Institut Pendidikan Indonesia is there [18]. This type of financing does not entirely increase economic growth because financing with contracts such as buying and selling, leasing, and hiwalah are generally used for consumptive needs and not for working capital [19], so the effects and impacts of technological developments and the use of technology in the economic system, especially students as economic actors in this digitalization era need to be filled with a fundamental and inherent understanding of the effective use of e-commerce.

## 4 Conclusion

Based on the results of research that has been done, e-commerce is one of the forms of development technology in Indonesia, which could help with easy Fulfill the Public. 44.8% results data analysis shows that transactions with e-commerce are more desirable because of a wider market share and more convenience. Time and price comparisons between products can be more accurate without a limit. But with the developments is an important job of the government, society, and the world of education so that it does not dissolve. So that impacts society, which will not be polemic or negative. So that an increase in understanding of the basic principles of economics can be seen from

the learning outcomes and activities of the student learning process while in class after students receive treatment. Thus, students' understanding of basic economic principles has increased, and e-commerce media effectively supports the economic system in the era of digitalization and a creative and innovative economy.

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