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Consumer behavior with Artificial intelligence products

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ABSTRACT

In today's era, science and technology have made rapid progress, which makes the rapid formation of the Internet era, and promotes the wide application of artificial intelligence in the commercial field. With the rapid development of e-commerce, online shopping has become more and more popular, and online shopping has become the way of shopping chosen by more and more people. In the context of the continuous development of artificial intelligence, for the online shopping industry, actively citing artificial intelligence is very beneficial to the development of the industry. However, considering that consumers' acceptance of intelligent customer service is different, this artical will use Technology Acceptance Model to analyze the usefulness and ease of intelligent customer service, and confirm consumers' acceptance of intelligent customer service in the process of online consumption. The remainder of this paper is organized as follows.

KEYWORDS

Consumer; Artificial intelligence products; Online shopping.

1. INTRODUCTION

In recent years, the level of artificial intelligence has developed rapidly, playing an increasingly important role in our economy, and has gradually become a driver of productivity and economic growth. At the same time, online shopping has gradually become the main channel for consumers to buy products. Artificial intelligence products have been accepted and adopted more by consumers is an important reason of the increasing of that [1]. Not only the people's lives have been influenced by the widespread spread of Internet technology, and also the online business have been affected too. In the first place, consumers are not bound by time or place when they shop online， they can buy products and services whenever and wherever they want. In the second place, they can save even more such as money, energy and time. China's online retail sales will reach 13.79 trillion yuan in 2022, up 4 percent from last year, CNR cn.reported. At the same time, the website further predicts that with the rapid development of the digital economy in the future, online consumer demand will continue to grow, and online retail will further promote the recovery of consumption. After many years, artificial intelligence and trading online will play an important role in the Chinese digital economy.

With the online sales platform becoming more and more the mainstream way of consumers shopping, online customer service has become a very important part of consumers in the shopping link. In the case of the rapid development of the level of e-commerce in the world, If enterprises can improve their e-commerce capabilities and better interact with customers, they will improve their competitiveness [2]. Customer service has played a crucial role in online shopping platforms. In the context of the continuous development of intelligent technology, for the power industry, intelligent technology should also be actively introduced to achieve the construction of online intelligent

customer service systems. Due to the particularity of the network industry, the customer service has to answer a lot of customer questions and complaints every day, which also causes the customer service staff to have greater work pressure every day. In the context of the development of intelligent technology, through the construction of intelligent customer service system, the work pressure of online customer service personnel can be alleviated, and the quality of power customer service can be improved [3]. Merchants need to investigate the needs of consumers and what factors affect their purchasing behavior, Consumer acceptance of these new technologies is also being examined [3].

First of all, for sellers, customer service represents the direct communication between businesses and consumers, and the quality of customer service can help establish a good bridge between the store and consumers, playing a bond role. Through high level, efficient and reliable customer service, it can enhance the trust and dependence on customers, help buyers to solve questions and confusion about goods, better purchase goods, reduce problems before shopping, reduce the number of returns, and improve customer satisfaction. At the same time, high-quality customer service can better solve customers' after-sales problems, by providing effective customer service, make customers more satisfied, cultivate loyalty between merchants and buyers, thereby enhancing customer retention rate, reducing customer turnover rate, and improving customer stickiness. A good customer service level can also help businesses establish a good reputation, and through customer service as the main medium, create a high-quality corporate image, retain customers and attract more hidden consumers.

Online shopping has been around for a long time, with the rapid development of science and technology, the intelligent customer service of online shopping platforms has gradually increased, which is matched by the development of artificial intelligence. At the same time, with the increase of labor costs and uncontrollable objective factors such as time and space, Intelligent customer service is gradually increasing to make up for the shortcomings of human customer service in many parts. chat box that the store has no artificial customer service, only intelligent customer service. Intelligent customer service is often set by the store in advance to set some fixed questions to answer the questions of the buyer, the buyer only need to click on the problem that the business set can be immediately answered, the general business set questions are basic questions, the most questions raised in the buyer's consultation, but there are inevitably many buyers will put forward the system has not set personalized questions. In this case, intelligent customer service will be difficult to meet the needs of buyers, which may affect the buyer's desire to buy or make the buyer's shopping experience decline.

Investigate the acceptance degree of consumers to intelligent customer service in online shopping, the influence of intelligent customer service on consumers' purchasing behavior, and analyze why consumers have different acceptance levels for two different consumers.

2. LITERATURE REVIEW

Artificial customer service and intelligent customer service have their advantages and disadvantages, and can meet different consumer consumption needs. Surveying service quality, customer satisfaction and online purchase intentions plays a vital role for market researchers and sellers [2]. In some groups of consumers who often shop online, the recognition and trust of online shopping is as important as the perceived usefulness and perceived ease of use known to the public in TAM [4]. However, In TMA, attitudes toward a product interact with consumer acceptance and emotional responses [5]. In this paper, TAM model will be used to analyze the usefulness and ease of use of artificial and intelligent customer service, and intelligent and manual customer service will be taken as the main dependent variables of this paper.

The Technology Acceptance Model used in this paper, first proposed by Davies (1989), includes the core variables of user motivation, namely perceived ease of use (PU), perceived usefulness (PEOU) and attitude towards technology. A number of previous studies on TAM have established a link

between PU's attitude towards using the technology, and PEOU's attitude towards using the technology. PU is defined as the degree to which a person believes that using a particular technology will increase his efficiency, and PEOU is defined as the degree to which using a particular technology does not require effort [6]. The model holds that some external variables will affect perceived usefulness and ease of use, and usefulness and ease of use will affect the user's attitude towards use (Davies,1989). Perceived usefulness and perceived ease of use are often seen as key variables that explain the level of consumer acceptance of new technologies [7]. The TAM originated in the fields of sociology and psychology and is the most commonly used model in various studies. The main goal of TAM is to predict user adoption of new technologies, and in information systems in general, perceived usefulness and perceived applicability are the most important factors in TAM [8].The TAM has established a reputation, has been recognized by many academic researchers, and has been widely adopted to explain the adoption of innovative technologies by individual consumers, so much so that the TAM is used in many studies involving the degree of technology of users [9]. We choose to apply TAM to our research, which can help us more accurately understand the acceptance degree of consumers for the new scientific and technological intelligent customer service, so we use TAM in this paper.

3. METHOD

3.1. Survey methods

In this experiment, we will adopt the questionnaire survey method to obtain consumers' acceptance of intelligent customer service in the most intuitive and accurate way. This is the most commonly used method in general experiments, and it is also the method we will adopt in this experiment. Take the consumers of online platform as our research object. In view of the current online shopping platform consumer group is relatively young, our questionnaire filling group is also relatively young, the age is under 50 years old. Such age restriction makes the data we obtain more accurate, ensures that the respondents we control in this way are real online consumers, and improves the accuracy of the survey results. Send questionnaires directly to online consumers who are the most common users of intelligent customer service, and get the most intuitive answers.

3.2. Data collection

Use a basic but practical sampling method: the "snowball" sampling method. Distribute the questionnaire to different students and friends, and then ask them to distribute the questionnaire to spread the word as soon as possible. Or publish questionnaires on WeChat, microblog and other social platforms to attract more people to fill in the questionnaire in a superimposed manner.

3.3. TAM

TAM is used to measure the user’s acceptance of new technology. It is widely recognized and used by people, so we also use it in this paper [10]. TAM extends the technology acceptance model, taking some brand content and customer purchase platform as additional factors of new technology to determine whether customers can accept new technology, In this way, development has been achieved [11]. To predict the acceptance willingness of Chinese consumers on the network platform for intelligent customer service.

This scale has been modified for reliability and validity test measurements in previous studies. Two groups of items were collected and studied for each variable according to the maximum Cronbach’s alpha coefficient, and the items shown in Table 1 were used to measure variables.

The table entries of the four scales of perceived usefulness (PU) and perceived ease of use (PEOU) are from Kucukusta et al. [12].

Table 1. Entries of the four scales of perceived usefulness (PU) and perceived ease of use (PEOU)

PU	**Using the intelligent customer service would make the shopping easier.**
	Using the intelligent customer service would be useful for my shopping.
	Using the intelligent customer service would help me to shop more quickly.
	Using the intelligent customer service would help me to shop more efficiency.
PEOU	**Using the intelligent customer service would be easy for me to learn.**
	Using the intelligent customer service would not require much mental effort.
	Using the intelligent customer service would be simple to do.
	Using the intelligent would be easy following the instructions off the app.

4. RESULT

Table 2. Using the intelligent customer service would make the shopping easier.

Choice	Total	Proportion
Yes	62	89.96%
No	7	10.14%
Valid number of applicants	69	

In order to complete this experiment, this table has created questionnaires and sent them to consumers to fill out, and in the end I got 69 survey results. Now let's turn our attention to the results of this experiment. According to the filling result of question 1, 62 people chose the option that intelligent customer service can make shopping behavior easier, accounting for 89.86%, which is almost an overwhelming choice. It can be seen that most consumers recognize that intelligent customer service can make shopping behavior easier.

Table 3. Using the intelligent customer service would be useful for my shopping.

Choice	Total	Proportion
Yes	61	88.41%
No	8	11.59%
Valid number of applicants	69	

Table 4. Using the intelligent customer service would help me to shop more quickly.

Choice	Total	Proportion
Yes	61	88.41%
No	8	11.59%
Valid number of applicants	69	

Then let's look at the second and third questions, the results of these two questions are exactly the same, there are 61 people choose the option "yes", that is, 88.41% of people think that intelligent customer service is helpful to shopping behavior and can make shopping behavior faster.

Table 5. Using the intelligent customer service would help me to shop more efficiency.

Choice	Total	Proportion
Yes	58	84.06%
No	11	15.94%
Valid number of applicants	69	

The two choices of the last question are not as big as the first three questions, but there is still a big gap, 84.06% of consumers think that intelligent customer service can help consumers make shopping behavior more effective. All in all, through these four questions, we can learn that intelligent customer service has a very high ease of use for consumers.

Turning to perceived usefulness, the answers to these four questions also have a clear tendency.

Table 6. Using the intelligent customer service would be easy for me.

Choice	Total	Proportion
Yes	55	79.71%
No	14	20.29%
Valid number of applicants	69	

In the first question, 79.71% of consumers chose intelligent customer service to make it easier for them to learn.

Table 7. Using the intelligent customer service would not require much mental effort.

Choice	Total	Proportion
Yes	56	81.16%
No	13	18.84%
Valid number of applicants	69	

Table 8. Using the intelligent customer service would be simple to do.

Choice	Total	Proportion
Yes	56	81.16%
No	13	18.84%
Valid number of applicants	69	

Looking at the second and third questions, 81.16% of the choices were obtained in the option "Yes", which shows that almost all consumers believe that intelligent customer service will not need to pay more mental labor, and intelligent customer service will be simpler to use.

Looking at the last question, there are also a lot of consumers, reaching 85.51% of the number of consumers choose intelligent customer service according to the instructions of the application can

make the operation easier. It can be seen that intelligent customer service has a very high usefulness for consumers

Table 9. Using the intelligent would be easy following the instructions off the app.

Choice	Total	Proportion
Yes	59	85.51%
No	10	14.49%
Valid number of applicants	69	

5. CONCLUSION

To sum up, we can clearly conclude that for the vast majority of consumers, the perceived ease of use and perceived usefulness of intelligent customer service are very high, and these questionnaires prove such answers. The application of intelligent customer service has more advantages than disadvantages for the shopping platform. The comprehensive application of intelligent customer service to the shopping platform is a correct measure in line with the development of the current era, which can make the shopping behavior of consumers much easier and is very conducive to the consumption behavior of consumers.

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