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E-COMMERCE

Master's Thesis

REMZİ ONUR BEŞEN

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Supervisor: DR. ADNAN VEYSEL ERTEMEL

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ABSTRACT

SEARCH ENGINE OPTIMIZATION AND E-COMMERCE

Remzi Onur Beşen

Business Administration Master's Program

Thesis Advisor: Dr. Adnan Veysel Ertemel

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Today, e-commerce has become one of the most effective and accessible commerce tools. At this point, search engine optimization emerges as one of the important factors that guide e-commerce. Improving search engine optimization techniques is of critical importance in terms of e-commerce reach, visibility, and customer acquisition. In the present study, the results of an existing survey study, which was prepared to evaluate the usability of e-commerce sites, were re-evaluated. The sample of the research includes 88 people who have successfully completed the Human Computer Interaction (HCI) course at Atatürk University Faculty of Economics and Administrative Sciences Department of Management Information Systems and the five most frequently used e-commerce sites in Turkey. As a result of the evaluation of the data of the survey study, it was deduced that providing personalization to internet users is of great importance on the usability levels of e-commerce web pages.

Keywords: Search Engine Optimization, SEO, e-commerce, digital marketing

ÖZET

ARAMA MOTORU OPTİMİZASYONU VE E-TİCARET

Remzi Onur Beşen

İşletme Yüksek Lisans

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ARAMA MOTORU OPTİMİZASYONU VE E-TİCARET

Günümüzde e-ticaret en etkili ve ulaşılabilie ticaret araçlarından biri haline gelmiştir. Bu noktada, arama motoru optimizasyonu e-ticarete yön veren önemli etkenlerden biri olarak karışımıza çıkmaktadır. Arama motoru optimizasyonu tekniklerinin iyileştirilmesi e-ticaret erişimi, görünürlüğü ve müşteri kazanımı açısından oldukça kritik bir önem taşımaktadır. Mevcut çalışmada, e-ticaret sitelerinin kullanılabilirliğinin değerlendirilmesi amacıyla hazırlanmış olan mevcut bir anket çalışmasının sonuçları yeniden değerlendirilmiştir. Araştırmanın örneklemi Atatürk Üniversitesi İktisadi ve İdari Bilimler Fakültesi Yönetim Bilişim Sistemleri Bölümünde İnsan Bilgisayar Etkileşimi (İBE) dersini daha önce başarı ile tamamlamış 88 kişiyi ve Türkiye'de en sıklıkla kullanılan beş e-ticaret sitesini kapsamaktadır. Anket çalışmasının verilerinin değerlendirilmesi sonucunda internet kullanıcılarına kişiselleştirme sağlanmasının e-ticaret web sayfalarının kullanılabilirlik düzeyleri üzerinde büyük önem taşıdığı çıkarımı yapılmıştır.

Anahtar Kelimeler: Arama Motoru Optimizasyonu, SEO, e-ticaret, dijital pazarlama

TABLE OF CONTENTS

ABBREVIATIONS

ATM	:	Automatic Teller Machine
B2B	:	Business to Business
B2C	:	Business to Consumer
EDI	:	Electronic Data Interchange
EFT	:	Electronic Funds Transfer
ERP	:	Electronic Resource Planning
PPC	:	Pay Per Click
SEO	:	Search Engine Optimization

1. INTRODUCTION

Today, shopping processes can be carried out independently of time and place thanks to e-commerce. Especially after 1995, with the increase in internet usage, e-commerce transaction volume has been increasing gradually. According to the data of the Turkish Statistical Institute; In 2015, while the rate of individuals using the internet to order or purchase goods or services for personal use was 33.1 percent, the rate of those who shopped online in the previous year was 30.8 percent. Based on these results, it is observed that the increase in e-commerce usage rate in a year is close to 3 percent. In the twelve-month period between April 2014 and March 2015, 57.4 percent of the individuals who shopped online were clothing and sports equipment, 27 percent of them were travel tickets, car rentals, etc., and 25.5 percent of them were household goods. Furniture, toys, white goods, etc.), 22.4 percent electronic devices (Mobile phone, camera, radio, TV, DVD player, etc.), 18.4 percent books, magazines, newspapers (including e-books) It is seen that various products are available over the internet.

Organizations such as the World Trade Organization (WTO), the United Nations Center for the Facilitation of Management, Trade and Transport Transactions (CEFACT), the Organization for Economic Cooperation and Development (OECD), and the Turkish Electronic Commerce Board (ETIK) have made various definitions for e-commerce. Based on these definitions, e-commerce; can be defined as the realization of the presentation, advertisement, order, sales and marketing activities of information, products and services over the internet without the need for a direct physical connection.

In terms of e-commerce applied methods and applications, Google applications are divided into classes such as content marketing, e-mail marketing, search engine optimization, social media marketing, competition marketing, multi-channel sales, free and fast shipping (Öztürk 2016). All kinds of technological products used while performing these methods and applications constitute the tools of e-commerce. Commonly used e-commerce tools; television, telecommunications, internet, telephone, fax, electronic payment and money transfer systems, electronic data interchange (EDI), digital television and computer. These tools assist in many activities such as ordering

products, trading, delivery and confirmation. Although e-commerce tools are so diverse, the most widely used tool today is the internet.

E-commerce system has parties such as buyers, sellers, manufacturers, brokers, insurance and shipping companies. Various forms of e-commerce activities take place between these parties. E-commerce types are divided into five classes: business to business (B2B), business to consumer (B2C), business to government (B2G), consumer to government (C2G) and consumer to consumer (C2C).

According to the 'E-commerce Market Size' report presented by the Turkish Informatics Industry Association (TÜBİSAD) in 2016, e-commerce sites are basically divided into two main classes as multi-channel and online only. Within the scope of the multi-channel e-commerce market; electronics, clothing - footwear, leisure– culture, home-decoration, vacation - travel and other categories, while only the online class; It creates online legal betting, private shopping, vacation – travel, marketplace, vertical and multi-category sites.

In a study Zerenler (2013), the differences between e-commerce and traditional commerce were revealed in terms of accessibility, global access, standardization, wealth, interaction, information density and personalization factors. In the study conducted by Ene (2002), the advantages of e-commerce are listed as easy access and cheap cost, superior competition and quality service, cheaper products and services, shopping and sales from anywhere, new job opportunities, new products and faster access to needs.

Considering the advantages of e-commerce pages and their differences compared to traditional commerce, it can be said that the design of e-commerce web pages is also important. The more effective design of the interface design of the web page for users can be achieved through usability studies. In today's technology, the impact of the internet on our lives is increasing day by day. Commerce, advertising and many business branches over the internet are developing rapidly. In order to stand out in this large area and to appeal to more users, it is of great importance. Considering that search engines have become the primary source of accessing information on the Internet, search engines have

become the channels for websites to reach users. If a user wants to reach any information, but does not know the addresses of the websites related to him, he will use search engines and go to one of the results that appear. In fact, many users go to the site they want to reach by typing some of their web addresses into search engines.

Among the search engines, there is no doubt that Google is the clear leader. The data provided by Stat Counter, based on the period between December 2011 and December 2012, is by far the leader with a rate of 91.35 percent worldwide and 98.23 percent in Turkey. As a result of its investments in the Turkish market, Yandex's market share is expected to increase in 2013.

Today, there are a wide variety of internet services that allow users to meet their daily needs in the virtual world. The most important load at this point falls on e-commerce pages. In this study, the concept of e-commerce and improving the usability of active e-commerce sites in Turkey are discussed. In this quantitative study carried out to evaluate the usability of e-commerce sites, data were collected through a questionnaire. The sample of the study was determined by the purposive sampling method. The sample of the research consists of 88 people who have successfully completed the Human Computer Interaction (HCI) course in the Department of Management Information Systems, Faculty of Economics and Administrative Sciences, Atatürk University. The Survey for Determining the Usability Level of E-Commerce Sites was developed in the light of the information and data obtained from the participants' examination of three e-commerce sites in different areas that are most used in Turkey. When a general evaluation is made, it can be concluded that providing personalization to users is of great importance on the usability levels of e-commerce web pages.

2. LITERATURE REVIEW

2.1 SEARCH ENGINE OPTIMIZATION

Depending on the change in the development processes of information technologies, the shape of economic activities also varies. The way of doing business, which is generally face-to-face, connected to the written recording system of the past, is rapidly and increasingly transforming into activities with electronic infrastructure. There is also an incredible increase in information systems and information networks and a link between organizations. Electronic commerce, which is a product of the developments in information technologies and especially Internet technology, has become widespread since the second half of the 1990s with the internet becoming a place of commerce .

Electronic commerce has been carried out in the USA since the 1960s with the Electronic Data Interchange (EDI) system. This system is a type of commercial activity that allows the transmission of standard documents that enable commercial activities by communicating between the computer systems of the enterprises and is open to everyone. However, the EDI system is a costly system that is difficult to set up for small businesses. The low cost of the internet compared to EDI has made the idea that commerce can take place over the internet an attractive idea for everyone [9].

Over the course of 30 years, electronic commerce has shown differences. It uses systems such as e-commerce, electronic capital transfer and electronic information exchange. These systems were created in the late 1970s and provided companies with facilitating benefits such as purchasing, transmitting orders or invoices electronically. The development of credit cards, ATM (Automatic Teller Machine) and telephone banking in the 1980s and -Online shopping, which is a frequently used form in this sector with the ease of trade forms, was founded in England in 1979 by Michael Aldrich. B2B; The e-commerce type, which is called Business to Business e-commerce from company to company, was first found by Thomson Holidays in 1981. B2C (Business to Consumer) e-commerce, called company-to-consumer, was found in 1984 and the development of e-commerce continues to grow increasingly. In the 1980s, online shopping, automobile

manufacturers, and in the 1990s e - commerce started to include data mining and enterprise resource planning (ERP) system.

The most important criterion for the development of e-commerce is the security of the information sent in a virtual environment. For this reason, it is of great importance that all kinds of communication and shopping carried out in the Internet environment can only be accessed by the person or institutions that are parties to the transaction. In cases where the security of this information is not provided properly, an atmosphere of trust will not be established and thus electronic commerce will not develop. At this point, the importance of the security of e-commerce increases one more time.

When e-commerce is considered as commercial activities in the Internet environment, it is necessary to mention two types in terms of transaction format. The first of these e-commerce forms is indirect e-commerce. Here, the concept of indirect e-commerce is defined as the commercial activity of products that are ordered over the Internet but can be delivered in classical ways.

The second is direct e-commerce. It is an e-commerce format that can be ordered over the internet and is subject to trade again to be delivered over the internet. The reason for these different definitions is; The requirement of "legal infrastructure", which makes it necessary to prepare the infrastructure of the e-commerce system and is one of the most important elements of these studies, arises in direct e-commerce transactions. The legal rules that exist today cannot meet the needs of direct e-commerce. However, the importance of preparing the legal infrastructure for the development and change of e-commerce has increased significantly today.

In parallel with the changes and developments in the world, many countries and international organizations closely follow the developments in e-commerce. However, these institutions and organizations have definitions related to e-commerce:

"Production, advertisement sales and distribution of goods and services are made over telecommunication networks." (WTO- World Health Organization).

"Digitized written text, all commercial transactions that concern individuals and institutions based on the processing and transmission of sound and image." (OECD-Economic Cooperation and Development Organization).

"Structured and unstructured business information for the execution of business, management and consumption activities between producers, consumers and public institutions and other organizations via electronic means (e-mail, electronic bulletin boards, WWW technology, smart cards, EFT, electronic data exchange, etc.) is to be shared. "

According to the definition of the European Commission in 1997, "electronic commerce is the conduct of business activities electronically. In addition, E-commerce is defined as the electronic purchase, sale, order or delivery of products over the internet network. In addition, tools such as television, electronic funds transfer (EFT), fax, electronic data communication (EDI) telephone are frequently used in commercial transactions. Transactions such as placing orders by phone and making payments by credit card are examples of electronic commerce. The differences of e-commerce compared to traditional commerce are mostly seen in communication and approval processes. There are many ways in the traditional method for data transfer. However, not all of them are faster than e-mail and other data transfer processes commonly used in e-commerce.

Although e-commerce is not a new definition, the opportunities offered by the internet environment; The popularity of the concept of electronic commerce has increased day by day because of the simultaneous transmission of audio, video and written texts by one or more people in commercial activities, the lack of space and time restrictions and the ability to process them at lower costs. Due to these possibilities of the internet, the internet is more flexible than other trading tools. In addition, this interactive environment removes the barriers to trade and communication.

90 percent of internet users use search engines to find information online, so it is very important for your website to be one of the top 20 results in the search engine. A successful site optimization brings quality customers and customer potential to the site. For this reason, it is very important to optimize the site for search engines. However, if

the site is optimized and its position in the search engine does not change after a certain period of time, the website should be re-analyzed.

A search engine is a type of software that collects information about web pages. Information collected; It consists of keywords or phrases describing the content of the site, the URL of the site, the code that creates the page, and the links to and from the site. Then the collected information is indexed and stored in the database. All this information gathering is done by a software called search robot (or crawler, spider-spider).

Search engines act as a bridge between published web pages and users. A search engine is a system that lists the best web pages that contain any information that users need, and that allows the user to access the information they are looking for as soon as possible. In the search engine operating system, search engine robots collect information about URLs. The collected information is stored in databases. When users search in the search engine, the data in this database is examined and the websites are ranked with a compliance algorithm [3].

Nowadays, search engines should be considered as the main source of information. They are the most important tools that enable users to access websites. If users do not know the address of the website related to the subject they are looking for, they use search engines to find relevant websites.

StatCounter, according to October 2019 updated data, Google's 92.78 percent in the global market, in the Turkish market.

Since it has a market share of 89.63 percent, the SEO stages and processes in the research were limited to Google's algorithm. In addition, another reason that supports this situation is that Google's lowest market share rate was 89.47 percent in December 2014, when the world search engine market share statistics of the last 5 years are examined, and with this rate, it still dominates the market [4,5,6].

Many users use search engines even though they know the address of the website. Instead of typing the website address in the address bar, users type the website name in the search bar. The statistics obtained with the Google Ads keyword planning tool prove this situation [7]. It is predicted that the keyword 'facebook' in searches in Turkey will receive 14,293,123 impressions and 1,293,981 clicks in November 2019. Although users know the address of facebook.com, they prefer to search on Google to connect to facebook.com.

Search engine ads and organic results are ways of listing that should not be confused. The word "Advertising" is placed at the beginning of the page addresses of search engine advertisements. These ad spaces can be located at the beginning of the page, at the end of the page and in the right column of the page in the search results. This listing type is paid and works with a bidding strategy. Organic search results are listed for free. Organic search results are formed by listing the pages that give the most appropriate and highest quality results for the keyword that users are searching for. Organic search results include the results that each search engine evaluates and lists with its own algorithm. In organic search results, it is not possible to change the rankings for a fee [8].

Between the years 2000 and 2019, the academic literature on search engine optimization (SEO) was researched by scanning the Google Scholar index, the definitions made were revealed and the common aspects were examined. As a result of the screening, the following definitions have been reached;

    i. SEO forms part of search engine marketing (SEM), which defines the steps taken to organically grow a site's relevance by building links, writing powerful content, or submitting it to search sites [10].

    ii. Search engine optimization is the process of improving a website's position. Thus, the web page will appear higher in the search results of major search engines [11].

    iii. SEO is the process of influencing the visibility of a website or a web page in the "natural" or unpaid search results of a search engine [12].

iv. SEO is the set of processes that enable websites to be developed in the most appropriate way for the functioning structure of search engines in order to rank better in the search results of the relevant keywords [13].

v. Search engine optimization (SEO) is about making small changes to certain parts of the website. Looking at these small improvements one by one, these changes do not mean much, but when combined with other optimization processes, they can have a remarkable effect on the user experience and performance of the web page in organic search results [14].

vi. The main purpose of SEO is to help websites or web pages rank at the top of organic search results by increasing the relevance of the search query users typed in the search engine [15].

vii. Search Engine Optimization is about applications that aim to increase the visibility and traffic (visitors) of a website or a web page in organic search engine results [16].

It has been observed that the search engine optimization (SEO) definitions in the literature focus on improving the ranking in organic search results. In a nutshell, SEO is the name given to all of the work done to make web pages perform better in organic search results.

2.1.1 Search Engine Optimization Techniques

The work done in the background is the most important part of the search engine. Search robots collect information about each URL and this information is stored in the database. Then, when the user uses the search engine to search, the references in this database are checked and the results are returned.

Primary search engines make up the bulk of the site's traffic. Major search engines such as Google and Yahoo fall into this category. Also, most search engines in this category

don't just search. They also include additional features such as email, maps, news, and many fun activities for users.

Meanwhile, secondary search engines cater to a smaller, specific audience, yet their content is general. They do not provide as much traffic to sites as primary search engines; however, they are very useful for regional or more specific calls. Examples include Lycos, LookSmart, Miva, Ask.com, and Espotting. Secondary search engines should also be taken into consideration while organizing the site in order to rank high in search results. Although they do not generate too much traffic, they generate significant traffic that cannot be ignored.

On the other hand, third type, the targeted search engines are also called titled search engines. This is the most special and specific of the three types. They focus on a very narrow field such as medicine, sports, science and travel. Some examples might be given as CitySearch, Yahoo! Travel, MusicSearch.

Here, the search algorithm is the algorithm that makes everything related work. The working principle of the search engine depends on the search algorithm or the way the user finds the data.

The search algorithm searches the database of keywords and URLs according to the problem and returns the searched words and phrases.

There exists several different search types.

  i. 1.List search: Information is searched linearly in a list. It causes a waste of time but gives few and specific results.
  ii. Tree search: Data groups are in the form of trees. A single data can be divided into many small data, and this is the search closest to the structure of the Internet; however, it is not the only successful search algorithm.

iii. SQL search: Provides a non-hierarchical search of data. This allows the data to be searched in each data subgroup.

iv. Informed search: This type of search aims to find a specific answer to a particular problem. The data resides in the tree structure. It is effective in special searches made in specific data groups.

v. Competitive search: Searches all possible consequences of the problem. It is a difficult algorithm to use for internet searches.

vi. Limited satisfaction seeking: The result is a combination of several constraints. Data groups can be searched in many ways. These searches do not have to be linear. It is very convenient for internet calls.

vii. The searches described here are some of the algorithms used on the Internet. In fact, often, multiple search algorithms are used together.

2.1.2 Advantages of Search Engine Optimization

Content marketing is a value-based approach that aims to inform consumers and promote them. In this approach, it is aimed to create content that will attract the attention of the consumer and inform them, to gain value in the eyes of the consumer and to direct the consumer to buy. The fact that search engines constantly analyze content, measure the quality, originality and relevance of these contents to the targeted keyword is a matter directly related to content marketing. It is very important at this stage that the content produced is produced in an SEO compatible structure.

It has been determined that the SEO studies made contribute to the brand image. For example, the use of favicon and the use of apple touch icon, which are among the best practices summarized by Google, are useful SEO practices that allow the business logo to be placed on the internet browser tab and on the home screen of smartphones. These applications improve the SEO structure, enable the logo and brand to reach more users

and increase brand awareness. Likewise, editing the page title and description can be considered as an example. Leaving page titles and descriptions uncontrolled raises the problem of not managing the perceptions of consumers reaching search engine results. Title and description arrangements made to ensure compliance with the SEO structure contribute to the issue of managing how consumers will encounter results, directing them to sales and creating brand perception.

With the digitalization of the industry and the transfer of businesses to the internet, the number of advertisers has increased. The competition in search engine ads is one of the factors that strains the marketing budgets of businesses and restricts the use of this type of advertising. The fact that SEO is an almost cost-free strategy attracts the attention of businesses. This situation indicates that SEO will gain more value in the coming years. However, as the number of businesses performing SEO practices increases, as in search engine ads, the competition here will increase and SEO will become a more time-consuming and costly marketing strategy. Businesses to work for keywords with low competition as soon as possible will create a competitive advantage in the future. Since SEO is a long-term strategy, businesses should realize their marketing strategies by taking this process into consideration.

2.2   E-COMMERCE CONCEPT

2.2.1 Digital Marketing and Main Features of E-Commerce

Digitalization has become one of the most important elements of the century we live in. Digitalization; It has become an important power that regulates and changes human relations, consumer behavior, and marketing channels of businesses in daily life, social life and working life. As in many different fields, the field of marketing, as in many different fields, attracts great attention from the academic world and the business world (Kaplan & Haenlein 2010, p.59). Because now we have a "digital consumer" before us. Understanding this consumer and being able to read his black box has become very difficult for both businesses and marketing academics. This new generation of consumers acquires much more than the information that businesses want to give them about their products and brands, thanks to social networks, which is the most important element of digital marketing. Therefore, it is extremely critical for businesses to understand digital marketing correctly and apply the right strategies. According to the 2017 global digital report prepared by We Are Social and Hootsuite; there are 3.77 billion internet users and 2.80 billion social media users in the world; in other words, half of the world's population uses the internet; 37 percent of them are on social networks. 60 percent of our population (approximately 48 million) are users of both the internet and social networks[1] These numbers are; It emphasizes the importance of the subject in social media marketing in general digital marketing. For today's businesses and consumers, digital is a strong two-way communication channel and an undeniably important market actor (Leeflang et al. 2014, p.3).

Digital marketing includes marketing activities using the internet, mobile and interactive platforms in order to promote the brand and the work done and to support all marketing activities, with methods different from the traditionally known media. The most important of these is that the internet provides an environment that can reach large masses in the cheapest way and completely changes the marketing strategies (Chaffey et al 2013,

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[1] We Are Social, 2017, https://wearesocial.com/special-reports/digital-in-2017-global-overview, 2021

p.102). Digital marketing, which can be defined as a marketing method that uses digital elements and enables all marketing activities to be carried out in a digital environment, has much greater advantages than traditional marketing practices, although it is defined as the realization of traditional marketing activities in the digital field (Dholakia and Bagozzi 2001, p.168). Businesses that benefit from the opportunities offered by digital platforms, reach much larger masses with lower costs thanks to digital channels, promote their products and services, offer after-sales service opportunities and provide access to the institution where consumers can easily convey their thoughts. The rapid development of technology and the increase in the use of mobile devices have changed the way of life of people, as well as their shopping habits. With the marketing of technology itself and the marketing of products thanks to technology, businesses allocate digital marketing in their budgets (Ryan 2016, p.1660).

Although there are many expressions about digital marketing, the main ones are; interactive marketing is online marketing, internet marketing or e-marketing. Digital marketing basically consists of four steps. These steps are respectively; acquire, earn, measure and optimize, own and grow. These four methods are a continuation of each other and are of strategic importance for businesses trying to reach their customers through digital marketing.

With the method of obtain; The activities used to attract the customer to the website or the page where the sale took place are discussed. The main methods of Get It are search engine optimization (SEO), social media marketing, e-mail marketing, affiliate marketing, viral marketing and mobile marketing (Chaffey et al. 2013, p.379). Search engine optimization (SEO: search engine optimization) is the whole of the work carried out in order for the website to rank higher on the search engine results page. When a word is typed into the search engine, a comprehensive algorithm kicks in and starts working with all linked web numbers. Thanks to this algorithm, the websites that are most associated with the word group are placed at the top of the first page. There are many criteria for search engines to decide which pages to rank first in searches. The content on the web page and the content taken from other websites are some of these criteria. Search engine optimization optimizes these criteria and enables them to rank first in popular

search engines (Giomelakis&Veglis 2016, p.380). Social media marketing is the direct or indirect marketing activities carried out through social web tools such as social networks, blogs, social marking and content sharing, which promote a product or service, increase awareness and brand awareness, and take action on the company or product/service (Gunelius 2011, p.22). Email Marketing; companies use e-mail methods in their product promotion, communication, sales and marketing activities by making use of the digital environment. It helps to use marketing activities more quickly, efficiently, comprehensively and effectively. E-mail marketing is used extensively by businesses at every stage of the marketing process, from collecting the ideas and opinions of consumers in the product development process, to customer relations, to providing the brand image (Deniz 2002). Revenue Partnership; It is a commission based sales and marketing method that is formed as a result of the company selling its products and services to visitors coming through an electronic commerce site with which it has an agreement. There are three types of income models in this system, which is also called shooting partnership. It is in the form of pay-per-membership (Cpl: Cost-Per-Lead), pay-per-sale (Cps: Cost-Per-Sale) and pay-per-click (Cpc: Cost-Per-Click) (Broussard 2000 p.440). Viral marketing, in other words, is the digital form of word of mouth marketing activities with the developing technology. Viral marketing is the use of consumer communication networks to promote products and services, strengthen brand image and increase sales. It emerged with the circulation of messages about the company, product or service on the Internet (Argan 2006, p.235). Mobile marketing is the marketing of products and services of businesses through mobile communication channels. Time and place are indirect activities that can be reached through direct, interactive or targeted communication (Hofacker et al. 2016, p.27). Thanks to the activities used in the get it method, the aim is to reach the customer and catch his interest.

With the win method, it is important in the stage of winning the customer who is attracted to the website after the acquisition technique. For this, other activities are also needed. Visitors coming to the website from search engines or different digital channels are potential customers, and it is necessary to win these potential customers and turn them into real customers. These activities are; Usability and accessibility studies are efforts to strengthen mechanisms that support customer decision, content management, increase the

usefulness of the site, give persuasive messages in sales texts, personalize according to the customer, separate customer sections and focus on these sections effectively (Chaffey et al. 2013, p.189).

For measure and optimize method, it can be said that it is the most important stage in digital marketing activities. Tests and analysis methods are applied that help the company measure its success, understand what it does right and wrong, and also enable it to compare itself with its competitors. With the help of web analyst software, the activities carried out in the obtain and win stages are evaluated, and the parts to be optimized are determined in line with the results. The success criteria of the website are compared with the success criteria of the competitors. In order to understand the expectations and ideas of the customers, a/b tests and multivariate tests are applied (Smith 2011, p.490).

The activities that need to be done in the embrace-grow stage are to satisfy the existing customers and to provide the best service for them. The techniques that can be used are; e-mail marketing, pricing strategies applications, personalization, loyalty programs, referral programs, community building (Chaffey et al. 2013, p.193).

Although it is known that e-Commerce was used over some wide area networks before, the real development of e-Commerce started with the commercial use of the Internet in 1991 and gained great momentum. Growing in parallel with the rapid developments in information technologies, e-Commerce has become a supportive and complementary approach rather than an alternative to traditional trade in many sectors (Saatçioğlu 2005).

E-commerce, which eliminates the concept of time and space, which is one of the most important constraints of the traditional marketing and sales approach, has also emerged as an innovation where small entrepreneurs can compete with large entrepreneurs, eliminate country borders, and provide access to markets that are practically inaccessible. E-commerce; Production, promotion, sales, insurance, distribution and payment transactions of goods and services are carried out through computer networks. E-commerce, by performing one or all of the commercial transactions electronically; It

consists of three stages: advertising and market research, ordering and delivery with payment (Igeme 2011).

According to another definition, e-commerce is any kind of commercial business activity where the parties communicate electronically without the need for a direct physical connection or physical exchange (Ersoy 1999).

Today, e-commerce is used as a concept that includes many different fields of activity. Thus, online advertising, marketing, sales, product and / or service purchase, order and payment transactions, customer support services, security, delivery of goods and services, banking, online public services, customs procedures, foreign trade transactions, etc. -It seems possible to accept it in trade (Laudon and Laudon 2010, p.92 & İyiler 2009 p.223).

e-Commerce has many advantages over traditional methods. These advantages can be listed as follows;

    i. E-Commerce; It can save on installation and operating costs by eliminating the need for store attendants and high-rent spaces, thus allowing it to compete with large companies at the same time,

    ii. Since the orders from the customers enter directly into the database, it can reduce the costs in the order process and provide serious practicality,

    iii. Creating opportunities in national and international markets by providing global access to products and services,

    iv. The system, which is active 24 hours a day, 7 days a week, removes the time limitation,

    v. Thanks to its electronic transactions and client-server architecture, it provides the ability to receive orders from large customer masses at the same time.

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It provides the opportunity to collect, preserve and mine data including customers' shopping trends.
It enables websites to act as frequently updated catalogs for existing customers (İgeme 2011).

It is reported that 5 percent of the total retail sales volume in the USA is realized with e-commerce and this form of trade is growing rapidly (Laudon and Laudon 2010, p.416). In our country, the e-Commerce transaction volume was around 24.5 million TL in 2010 (BKM, 2011).

Although there are various studies on e-commerce in Turkey, it is seen that these studies are not at the desired level. In this context; In a study conducted by Türkmen and Songür (2010), the reasons for the insufficient level of e-commerce use in SMEs were investigated. As a result of the study, it was determined that the customers do not prefer electronic commerce for security reasons, the lack of technical infrastructure of the enterprise, the lack of training in e-commerce, and the business customers do not want to buy a product that they do not see the reality as obstacles to the use of e-commerce in SMEs. In a study conducted by Tutar, Kocabay and Kılınç (2007) in the tourism sector, it was stated that the rate of e-commerce use of hotels increases with the number of stars (service quality) the hotel has. Again, in their research on the factors that prevent e-commerce in the sample of SMEs, Altıntaş, Altıntaş and Tokol (2006) found that the technological adaptation levels of enterprises and the perception of investment uncertainty are the most important obstacles to e-commerce.

Yelkikalan et al. (2011), on the other hand, determined the features that websites designed for e-commerce should have. These features are listed as being strong in Business Concept, Website Interface, Order and Delivery, Payment and Security. Coşkun (2004), on the other hand, in his study, based on the relevant data of certain countries in the world and the findings of previous field studies, evaluated that the legal legislation that will eliminate the problems related to investment in information technologies, globalization and security will affect e-commerce positively.

In his study, which focuses on the effects of e-commerce on the national economy from a different perspective, Çeştepe (2003) drew attention to the issue of legal legislation on taxation in case the developing e-commerce harms the country's economy in the future. Kalaycı (2004), on the other hand, discussed the economic effects of e-commerce and stated that e-commerce will have effects such as reducing transaction and research costs, accelerating business processes by increasing competition and increasing productivity in enterprises.

Özdemir et al. (2010), in their studies examining the phenomenon of e-commerce within the framework of Turkey-European Union Relations, stated that although the rate of access to the Internet in businesses is very high due to the inadequacy of the legislation regulating e-commerce in our country and the fact that commerce in the virtual environment is still seen as uncertainty. They found that the usage rates were low. As a solution to this, they suggested making arrangements to bring the legal legislation that will regulate e-commerce up to European Union standards and tidy up today's legal legislation, which is scattered. In the domestic literature, there is no research on the economic and legal factors affecting e-commerce transaction volume.

In the world literature, Wong (2003), in his study on the factors affecting e-commerce in Singapore, stated that the information systems and communication infrastructure, the national manpower trained in information technologies, the existence of official institutions to regulate, the adequacy of financial and legal legislation and the e-commerce of the state He mentioned that their incentives will improve e-commerce. Weixin (2006), in his study investigating the factors affecting the development of e-commerce in China, emphasized the demographic characteristics of the country, economic indicators, the importance of investment in information technologies and the level of preparation of consumers for this type of trade.

2.2.2 Classification of E-Commerce

2.2.3 Intercompany (B2B- business to business)

It is a type of e-commerce used between companies, it is simply called Electronic Data Interchange between companies. The companies ordering the supplier in electronic environment, obtaining their invoices and paying the prices are evaluated in this section. In this type of trade, because wholesale and sales of production products are at the forefront, the speed of information transfer is more prominent, while the emotional side is more prominent in B2C and the quality of the product is prioritized.

2.2.2.2 Company-to-consumer (B2C- business to consumer)

It is the type that comes to mind when it comes to e-commerce among the public. Food, electronics etc. made with Virtual Store applications. It is the type in which products are sold. Since this type of trade focuses on the properties of the products, products that can affect the consumer emotionally are sold.

2.2.2.3 Consumer-to-business (C2B-consumer-to-business)

It is a type of e-commerce that is generally used in crowd sourcing. An example of this type is free photo image sharing platforms provided by users.

2.2.2.4 Consumer to consumer (C2C- consumer to consumer)

This type is usually the type of e-commerce where two different consumers communicate by providing an online platform by the intermediary third party (Letgo, All Here, eBay… etc.). Even though the Peer to Peer (P2P) sales type, which does not have any intermediary, has become widespread, especially with the widespread use of virtual money, this can be included in C2C.

2.2.2.5 Company-public administration (B2A-Business to Administration)

Public tenders to be published on the Internet and companies bid electronically are the first examples. In order to support the spread of e-commerce, tax payments and customs procedures of the public are also transferred to the virtual world.

2.2.2.6 Between consumer-public administration (C2A-consumer to administration)

We can describe all kinds of tax, health and legal activity between the consumer and the public administration in this field. Driving license, passport applications, social security premiums and tax payments, etc. With the applications, it is planned to ensure the full transition to the Electronic State.

Here, although the e-commerce process seems to consist of two parties as the provider and purchaser of the service or product subject to the contract, many parties are involved in the field of e-commerce relationship, especially with the intervention of factors such as shipping, product or service guarantee, electronic payment system. It is possible to list these as buyers, sellers, manufacturers, banks, brokers, insurance companies, shipping companies, private sector information technologies, non-governmental organizations, universities, approval institutions, electronic notaries, Undersecretariat of Foreign Trade, Undersecretariat of Customs, IT developing and providing organizations.

2.3   SEARCH ENGINE OPTIMIZATION AND E-COMMERCE VISIBILITY

The development of digital technologies has brought a social transformation in terms of human history. The social transformation in question has transformed many areas from individuals' communication styles, ways of doing business, entertainment understanding, socialization styles and shopping habits. While new channels were opened in both mass communication and interpersonal communication, new trends emerged in customer-brand / company interaction. In addition to traditional marketing environments, businesses that continue their product, service promotion and sales activities in digital

channels have developed new marketing strategies for these platforms and started to use digital technologies to achieve their marketing goals.

Digital marketing hosts access platforms and communication tools consisting of all online channels used to communicate, establish relationships and maintain established relationships with the target audience or customers (Wymbs 2011, p.95). Digital marketing can be considered as the application of traditional marketing methods in digital channels or environments; however, it provides many advantages to institutions with its unique differences.

Although digital marketing applications provide companies with a great financial benefit in economic terms, thanks to its contributions such as simultaneous interaction with the target audience, updatability, creativity and being open to innovation, it also reveals its competitive characteristics. In digital marketing, the internet is at the most basic point and different application areas emerge thanks to the opportunities provided by new media and communication technologies to other digital marketing channels (Bulunmaz 2016, pp. 357-358).

With the widespread use of the internet, the information on the internet has become complex, search engines have been put on the market in order to organize the information and shares in these environments and in order to facilitate the users' work, and these engines become effective in a short time. According to the March 2019 data of the Digital Marketing Institute, a large global market share of 71 percent of the world search engine market is owned by Google company with its constantly evolving algorithms, a dominant online advertising platform and personalized user experience. According to the study of Digital Marketing Institute titled How to Measure and Optimize Your Digital Marketing Campaigns with Google Analytics in 2019, in searches made on search engines, users generally prefer the first three results. In this case, it is of great importance for companies to rise to the top of the search engines and stay there for a long time.

Internet, computers, cell phone, tablet and other mobile devices, digital TV, etc. might all be defined as a global accessible network. Day by day, the number of Internet users

continues to increase and communication on the Internet is becoming a daily routine. In this case, it has become an ordinary and even inevitable phenomenon for companies and brands to use the Internet for product presentations, brand creation and sales.

Marketing is defined as a process that initiated with the aim of getting to know the consumers long before the sale process, during the sale process and after the sale process. The main purpose of marketing is to create profit and benefit by anticipating the wishes and needs of the target consumer / customer by creating additional value (Özel 2012, pp.3-6). Digital marketing, on the other hand, uses the latest information communication technologies, thus it can be considered as a form of marketing used to reach target audience groups effectively. The opportunities offered by digital marketing offer brands and companies the opportunity to reach the target audience faster and cheaper, to introduce their products and services, to offer after-sales service, and to receive consumer opinions / feedback quickly and directly. The most prominent of these tools are digital marketing tools such as content communities, blogs, social media channels and search engines (Ryan 2016, p.1660). The development of digital marketing tools has made communication and interaction between target consumer groups, brands and businesses much easier and faster. Businesses and brands that prefer digital tools and channels as an effective way to convey their marketing and advertising messages use these tools as a communication tool in their different activities.

Digital marketing, social media marketing to companies, display advertising, email marketing, search engine optimization (SEO-Search Engine Optimization), mobile marketing, performance-based affiliate marketing, cost-per-click (PPC-Pay Per Click) all offer the opportunity to reach existing and potential customers through different digital tools and methods such as marketing and viral marketing. Digital marketing is an integral part of electronic commerce today and includes many different ways of presentation, promotion, marketing and sales activities of companies or brands.

ARPANET, which was created in 1969 for military purposes, forms the basis of the Internet. Internet has changed and developed in line with the needs and demands of users since the first periods of its emergence (Kara 2019, p.29). Since the 1970s, the computer

has caused a significant transformation in communication systems, and a technological leap has been experienced. In the 1990s, an unprecedented technological renewal period started. With the introduction of the computer into the structure of other communication tools, new communication technologies have emerged (Çakır 2004, p.169). When the internet network that enables multi-media and new communication technologies are combined together, this creates many spaces / environments for people to share their ideas, works and comments, offers sharing and discussion platforms, thus the internet functions as the most important supporter of the modern communication system.

The internet, which contains information resources open to sharing worldwide and enables cooperation between countless different communities, means "network of networks" on a global scale with these features. With the widespread use of the Internet, various search services started to be developed in the late 1980s. These services, which are not similar to today's search engines, have been used to access information on internet tools (Telnet, WAIS, Gopher, etc.) other than the World Wide Web (Web-WWW).

The Web, which is described as a revolution in the history of the Internet, began to be developed in 1989 and was first used in 1992 on the Internet. With the use of the web, the document structures on the Internet have changed, and the HTML (HyperText Mark Up Language) language, which supports the "hypertext / hypermedia" feature, which allows the electronic memory and pages to be linked to each other through links, has begun to develop. After 1992, with the increase in the number of documents created with HTML in the Web environment, search engines started to emerge. The first search engine is "Yahoo!" developed at Stanford University (Krediel et al. 2000; Schwartz 1998 p. 978).

Search engines are computer software that basically scan a group of electronic materials to access information, documents, citations or answers / results corresponding to a question posed by users. According to the type of software, the questions to be directed to the search engine can be composed of keywords, tables and subject titles, as well as a question structured with a spoken language. However, elements such as sound, pictures and images can also be searched by search engines (Feldman 1999, p.233). Search engines consist of three basic components: robot, database and agent. The robot goes to

the web page and reads it and follows the links to other pages within the site. Everything the robot finds is recorded in the database. The agent, on the other hand, sifted the most relevant addresses / sites among the millions of pages registered in the directory and ranks them according to their relevance (Sullivan 2000; Gordon & Pathak 1999, p.143; Dong & Su 1997, p.69).

As a result, here, it is possible to say that search engines are comparison and query-based data acquisition mechanisms that are used to find any content on the internet. Meanwhile, search engines are channels that offer convenience in terms of fast access to information, and that virtual media users often visit and use as a channel. Search engine marketing, on the other hand, has new opportunities as it requires an important and different application in terms of awareness-raising efforts of companies (Yurdakul & Bat 2011, p.57).

Search Engine Marketing (Search Engine Marketing-SEM) is the process of increasing the traffic and visibility of a website, a brand, a product or a service on digital platforms through a search engine. Search engine marketing is one of the important digital marketing titles in recent years, as every day millions of people are looking for answers on the Internet, and people's online experiences start with this search. Whether this search involves a problem that individuals are trying to solve, a product they are trying to buy, a vacation that s need to be planned, or a new restaurant to find, people prefer the results that they intend to find at the top of their search list. Search engine marketing (Search Engine Marketing-SEM) is an internet marketing method that enables promotion and sales by increasing the visibility of websites on search engine results pages. Search engine marketing consists of a series of procedures that use search engines to directly reach buyers and enable websites to reach target audiences through search engines, and includes comprehensive studies such as internet advertising, website optimization, and performance analysis (Scott 2009, p. 254). Search engine marketing is a flexible marketing method that provides direct access to potential target audiences and customer groups by providing rapid results, thus providing a strong support to the sales process (Hırdönmez 2010, p.37).

Search engine marketing is the process of gaining traffic and visibility from search engines with both paid and unpaid efforts. Search engine marketing covers two basic processes: SEO (Search Engine Optimization), gaining traffic through free listings; SEM (Search Engine Marketing), buying traffic through paid search lists. The process originally called "search engine marketing"; it is now used as an umbrella term rather than SEO and SEM. "Search Engine Marketing" or SEM is now typically used to describe paid search activity [2]

Search engine marketing can be considered one of the most effective ways of promotion, sales and growth in an increasingly competitive market. While millions of businesses and brands all compete for the same pair of eyes; online ads and their place in marketing communications have become extremely important, effective, widespread and measurable. Unlike traditional online advertising, in search engine marketing, advertisers can only pay when users actually click on an ad. When successfully implemented, SEM can provide stable traffic levels and ROI (Paraskevas et al. 2011, p.4).

Most online advertising campaigns have two main goals, which are brand development and direct response from target audience or customers. Choosing an appropriate marketing channel ultimately depends on which strategies will provide the highest return on investment. It is clear that companies that offer products and services on the web will benefit from internet advertising because their potential customers are already online. Non-web-based companies can choose online marketing to increase visibility and promote the brand. SEM also allows companies to closely monitor their target audiences in terms of audience acquisition for their brands. In the digital pre-marketing period, while companies spend large budgets on advertisements and have no clear idea about their effectiveness, marketing managers can now make detailed cost-benefit analyzes. This structure allows for realistic business models with visible results. Search engine marketing (SEM), which allows companies or brands to target consumers by placing ads on search engines, appears to be an effective audience acquisition strategy for marketing communication.

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[2] Search Engine Land, 2019, https://searchengineland.com/guide/what-is-sem, Date of Access:04.04.2021.

3. DATA AND METHOD

Within the scope of this study, which aims to develop a scale in order to determine the usability levels specific to e-commerce sites, three e-commerce sites that are the most preferred in terms of product diversity in Turkey and that appeal to a wide target audience were discussed. The steps to be followed for the scale to be developed; It consists of 3 stages: creating an item pool, structuring the scale, and evaluating the scale (Schwab 1980). At these stages, literature review, taking expert opinions, making the first simplification, arranging the scale, applying the sample, preparing the data of the applied scale for analysis, applying the factor analysis, making the second simplification, determining the number of factors and their loads, calculating the factor reliability, testing the validity of the scale and measuring the scale. In total, 12 steps were followed, which were determined as finalization.

After examining the guides for usability assessment and receiving expert opinions, the second stage, the scale structuring studies, was started. In the first step of this stage, the ideas obtained from the experts were tried to be converted into suitable items for the scale to be developed. According to the opinions of the experts, first simplifications were made and the title of the scale and the information required to be given within the scale were determined. The scale obtained after this stage was applied to a total of eighty-eight participants, which was formed by purposive sampling, one of the non-random sampling approaches. Participants are students who take Human Computer Interaction (IBE) course at Atatürk University Faculty of Economics and Administrative Sciences Department of Management Information Systems. During the scale development phase, no additional explanation was given to the sample group about the questionnaire and it was assumed that they knew the usability terms. In the evaluation step, which is the last stage of the scale development process, the data collected from the sample group were analyzed. In the analysis phase, firstly, whether the data are suitable for factor analysis or not was checked with Kaiser-Meyer-Olkin (KMO) coefficient and Barlett Sphericity test (Büyüköztürk 2005; Bayram 2004). The distribution status of the obtained data was examined by examining the histogram graph. After the data were found suitable for factor

analysis, exploratory factor analysis was used to examine the construct validity and factor structure of the questionnaire, and principal component analysis was used as the factorization technique. In the analyzes, the common factor variance of the factors on each variable, the factor loadings of the items, the explained variance ratios and the line graph were examined. The factor loads of the items were chosen as at least 0.40. Rotated (varimax) principal components analysis was applied to examine the factor structures. At the end of the scale development, Pearson correlation coefficient was calculated to determine the relationship between the factors and the factors. Finally, Cronbach's alpha internal consistency coefficient was calculated for item-interaction score correlation.

In the application phase of the scale, unlike the three e-commerce sites used for development, the application was carried out on the five most preferred e-commerce sites in Turkey. Five students who graduated from the Department of Management Information Systems evaluated the websites 'sahibinden.com', 'gittigidiyor.com', 'n11.com', 'D&R' and 'vatanbilgisayar.com' with the developed scale. Findings will be presented without the use of these site names.

4. FINDINGS

In this study, the findings regarding the scale development process, which consists of the steps of creating the item pool and arranging the scale, applying the scale to sampling, validity and reliability analyzes and finalizing the scale are presented under this heading. Explanations for the obtained factors have been tried to be explained by making use of ISO 9241 Usability Standards, Public Websites Directory (KAMİS) and Çağıltay (2011).

4.1 FACTOR ANALYSES

It is seen that the analyzed yes-no type items are grouped under 3 factors with an eigenvalue greater than 1. The first factor alone explained 21.39 percent of the total variance; It was determined that the second factor alone explained 15.941 percent of the total variance, and the third factor alone explained 12.672 percent of the total variance. It is seen that the total variance explained by these 3 factors regarding the scale is 50,281 percent. It is observed that the common variances of the three factors defined in relation to the items vary between 0.784 and 0.503. The first factor in the Questionnaire for Determining the Usability Level of E-commerce Sites is "specifying the mandatory fields in the forms", "defining the data entry progressively", "virtual keyboard", "media alternative" and "customer comments". The second factor is 'capital and lowercase input', 'background sound', 'renewal of identity verification' and 'text resizing'. It is seen that 'prevention of unnecessary data entry', 'information message' and 'frequently asked questions' items constitute the third factor.

4.2 VALIDITY AND RELIABILITY OF THE SCALES

The factors and items that make up the first part of the scale are as follows;

Factor 1: Mental Ergonomics and User Comments
Under this factor, there are 5 items that are necessary for the user not to get mentally tired in the site. These items are;

i. Specifying the mandatory fields to be filled in the forms: Specifying the important and mandatory fields that must be filled in the forms on the site ensures that the user is more careful in the information they will give.

ii. Gradual completion of data entry: If the data entries made within the site take place in the form of a certain process and stages, it will not create an additional concern by the user.

iii. Virtual Keyboard: The virtual keyboard in the site provides ease of use for the user.

iv. Media Alternative: Necessary alternatives should be offered for users with visual and hearing impairments to use the video content on the e-commerce site more effectively and efficiently. The video content and the visual elements in the environment should be explained in detail, and the sounds and effects outside the speech on the screen should also be included. Screen reader programs can be given as an example of alternative environments.

v. Customer Comments: Having a section on the site where customers can write their comments such as satisfaction, complaints and suggestions will help create the perception that the user cares.

Factor 2: Alternative Use Options

The items under this factor enable the user to be more efficient in an alternative way by using features such as text sizing within the site. This factor consists of 4 items.

i. Upper and lower case entry: Users should be allowed to use both uppercase and lowercase letters in data entry. It should be specified if there is case sensitivity when entering data such as password entry.

ii.   Background sound: The sounds in the background should be used carefully. Background sounds can be a problem for users with disabilities. For this reason, the use of background sounds should often be avoided. If it is very necessary to use background sound, then there should be an option to turn off or lower the background sound.

iii.   Renewal of identity verification: Users should be provided to continue their transactions from where they left off without losing any data when the necessary information is entered and the authentication is renewed when the session period is over.

iv.   Resizing the text: Disabled users should be allowed to resize the text on the site. Thus, disabled users will be able to perform their transactions easily without the need for any assistive technology.

Factor 3: Providing necessary information and preventing unnecessary transactions
Finding answers to the actions taken by the users on the site and the issues that they may have problems with will make the site more usable. On the contrary, the user's satisfaction should be increased by preventing the entry of unnecessary data.

i.   Prevention of unnecessary data interference: The data required to be entered within the site should not be questioned repeatedly. Unnecessary data entry can lead to user boredom and loss of time. If the data entry needs to be repeated, this must be done by the system, not the user. Therefore, unnecessary data entry should be avoided.

ii.   Information message: After the operation, the user must be informed about the result of the transaction. This information should be clear, concise, clear and understandable. If an error has been made after the process, users should be given guiding information about its solution.

iii.   Frequently Asked Questions: A "Frequently Asked Questions" page should be prepared by compiling previous problems and information desired to be obtained on the site. The questions on this page should be classified according to frequency and importance. The existence of this page provides a time advantage for both the customer and the business. In addition, thanks to this page, the questions asked to the business will not be repeated and the customer will be able to access this information more easily to solve his own problem.

The load values of the items in the first factor were 0.738 and 0.422, the second factor was 0.802 and 0.550, the third factor was 0.825 and 0.696, the fourth factor was 0.720 and 0.825, and the fifth factor was 0.783.

with 0.596, the sixth factor between 0.729 and 0.505, and the seventh factor between 0.884 and 0.468.

Factor 1: Content design

Page content needs to be consistent and designed for the target user. 7 items were taken under this factor.

i.   Consistency of pages: Features such as fonts, font sizes, font colors throughout the site should be consistent on all pages. Although the pages have changed, the user should be aware that they are still on the same site.

ii.   Transactional pages: The results obtained change as the criteria entered on the pages that can be searched or filtered by entering some criteria within the site. When users make more than one query within the same page, they should be able to complete their transactions by changing criteria without using the back and forth feature in the page. Keeping users on the same page while performing their transactions can increase their loyalty to the site.

iii. Submission of clear error messages: Error messages to be given on the site should be clear and understandable. In case of incorrect data entries, the error should be made visually apparent. Also, the error messages must be in the same format as the website content.

iv. List format: Lists need to be formatted in an easy to use and understandable way. It is necessary to pay attention to the consistency of features such as background color, text color, font size.

v. The design of links: The links within the site should be consistent, understandable and distinguishable from each other. Links can be made more distinct by using a different color or underline. Links should be consistent across and between pages.

vi. Choosing meaningful anchor tags: Anchor tags should provide information to the user about the content of the link. Anchor tags should be easy to understand and provide convenience in terms of access to information and time. They should be selected taking into account the target user characteristics.

vii. Font color and background: In order for users to read faster and understand better, the font color used in the texts should be black. Care should be taken to use plain and patternless backgrounds. The background design should not make the text difficult to read. Generally, designs with a light background color and a dark text color should be used. This selection is important in terms of reading speed.

Factor 2: Navigation items

The navigation elements on the site allow the user to operate the site in an easier and more understandable way. This factor consists of 4 items that target audience characteristics are taken into consideration.

i. Usable content: The headings, images and language should be preferred within the site, considering the target audience. It is important for the user to easily access the information they are looking for. Site content should be suitable for the purpose of the site.

ii. Placement of navigation elements: Navigation elements should be placed on the page in a way that they can be distinguished from each other. Navigation elements provide faster and easier access to the desired information. It is necessary to make a grouping between navigation items and between sub-items. The steps in the navigational structure should be simple and straightforward.

iii. Navigation elements consistency: Users can move around without using the back and forth keys thanks to the navigation elements. Having navigation elements throughout the site is important for ease of use. Navigation elements within the site must be consistent and in harmony with each other. The design of navigation elements should be meaningful and functional. Navigation elements should also provide the user with the information on which page they are on.

iv. Selection of category titles: Category titles should be created in a way that the user can understand. The links it contains must be clear and accurate.

Factor 3: Usability in Navigation and Data Entry

Navigation elements and data entries in the site must be created taking into account user characteristics. Explanations in navigation items and data entry fields should be followed by certain standards. There were 3 items under this factor.

i. Using annotation: Explanations should be included in the navigation items. On pages with a wide variety of content, users may not understand what they are from item names. Therefore, when the user hovers over the item, necessary explanations about that item should appear.

ii. Width of data entry fields: Data entry fields should have sufficient width and scroll bar should be avoided. For example; It is important that the user can see the information he typed in the search field at once. If some data entries are to be restricted, it is necessary to give the information about how many characters left while the user is entering the data. Credit card number, Identity number can be given as examples of these limitations.

iii. Consistency of data entry fields: In e-commerce sites with more than one data entry field, the data entry fields must have the same structure. Different data entry fields can pose difficulties for the user. For this, the enterprise must set a standard and data entry fields must be created according to this standard.

Factor 4: Technical specifications

Access to the site and fast access to the content on the pages are very important for users. There are 3 items under the technical characteristics factor.

i. Connection speed: The quality of the internet connection that users are connected to is effective in matters such as the loading time of the site and the arrival of the content when they enter the site. Low-size content (images, videos, animations, etc.) should be used to avoid delays that may occur while loading the site.

ii.   Page loading time: All pages on the website must be opened within 3 seconds at the latest. Users lose their attention on delayed pages and prefer to close the page instead of waiting.

iii.   Search engine optimization: E-commerce site should be in the first place in the query results of search engines. Search engine optimization is necessary for users to reach the site easily and in a short time.

Factor 5: Search and Page Design

The contents and search fields on the site enable users to process faster and access information. Three items were created for their design.

i.   Page structure: The main page and all sub-pages of the e-commerce site must be understandable. While designing the site, basic visual design principles should be considered. While creating the page structure, structures that allow users to quickly and easily access the information they are looking for should be preferred.

ii.   Organization of the content: Site design should be made by considering the content hierarchy. Relevance (proximity) diagrams, UML (Unified Modeling Language) diagrams or concept maps can be used when designing the organization of content. The information to be presented to the user should not be formed as a whole, but in small groups that are semantically related to each other.

iii.   Design of search fields: A design should be created so that users can search quickly and easily. The search box should be visible to users. The written information should be a sufficient area design to be seen. Search features should also be used with keyboard shortcuts.

Factor 6: Home and Site search

When users visit the home pages of e-commerce sites, they need to gain a positive impression about the page. For this, the scope of the search, the titles and tags found are very important. This factor consists of 3 items.

i. Creating an effective impression: The home page should be of a nature to make an effective impression on users. Home page content should be organized, content and titles should be grouped. It is important to have a search area within the site on the home page.

ii. Search scope: Search fields on the site should have the ability to search across the entire website.

iii. Titles and tags: Titles and tags within the site should be meaningful and consistent. Titles and tags need to be clear and understandable so that users can perform their actions quickly and easily.

Factor 7: Consistent content

The search options on the site and the information in the content should be created in a simple, understandable and consistent manner. This factor of consistency consists of 2 items.

i. Content consistency of the site: The content of the site should be in accordance with the grammar and spelling rules and should not expose users to excessive and unnecessary information.

ii. Simple and advanced search options: Search fields can be arranged by narrowing the search criteria for users who want to make a more detailed search. The search fields in the site should be allowed to be searched by simply

typing a keyword. While searching, grammar or spelling rules should not be expected.

4.3 RESEARCH MODEL FINDINGS AND HYPOTHESES RESULTS

Within the scope of this study, a scale has been developed to evaluate e-commerce web pages in terms of usability. In the first part of the scale, it is seen that the most effective factor in the usability levels of the sites is the data entry opportunity offered to the users. This may be because users feel that they are cared for and that their opinions are valued. While designing shopping sites, care should be taken to provide such opportunities. At the same time, in this section, it is seen that small feedbacks in the form of warnings and frequently asked questions provided by e-commerce sites are of least importance in terms of usability. This reveals the necessity of providing specific feedback rather than general, while designing e-commerce sites.

When the second part of the scale is examined, consistency-related factors such as the consistency of the pages of the site, the well-organized links and the legibility of the page are seen as the most important factors, and this is followed by the fact that the site is understandable and easy to use. These results may be due to the fact that users do not want to encounter different products on their way to reach the product they are looking for, and they want to act easily on this path. The least important factor that emerged in the second part was the simple search options on the site. Here, it can be said that the users expect the opportunities offered to be more special.

In the end, this study, in which the usability criteria of e-commerce sites were determined, showed that the expectations of the users from e-commerce sites were mostly to meet their individual needs and that all kinds of opportunities offered should be in this direction. It is clearly seen that this situation should be taken into account in the design of e-commerce sites and that general approaches should be avoided.

As a result, in the implementation phase of the developed scale, as a result of the evaluation of five different e-commerce sites by five users, the deficiencies of the most

preferred e-commerce sites in Turkey in terms of usability were observed in line with the answers given to the 1st part and 2nd part items in the scale.

On sites in the marketplace e-commerce category; The inadequacy of specifying the fields that must be filled in the forms within the site, the absence of a virtual keyboard, the absence of a media alternative such as a screen reader, especially for disabled users, the absence of customer comments, the inability to resize the font size and the lack of a frequently asked questions section negatively affect the usability of the e-commerce site. as affecting. In addition, the least important usability factors for this category are; It has been observed that there are alternative usage options, mental ergonomics and user comments. The inconsistency in the design of the links on the site is another striking element. Among the factors given within the scope of the scale, it was determined that content design, home page and on-site search factors fit less than others.

According to the findings in the entertainment & culture e-commerce categories, it was concluded that the font size could not be readjusted and there was no media alternative. It has been observed that the alternative use options factor is more inconsistent than the other factors. The inconsistency of the title tags on the e-commerce site and the inconsistency of the link designs were slightly negatively evaluated in terms of usability. Consistent content, homepage and on-site search factors have been observed to be less compatible.

In the e-commerce category with electronic products; The main usability shortcomings are that the font size in the texts cannot be resized and there is no media alternative. It was determined that the link labels of the item with the lowest mean value were not selected meaningfully. It was observed that the technical characteristics factor was among the evaluation factors given within the scope of the scale.

When the findings obtained in the application of the scale are evaluated in general, it is seen that the most preferred e-commerce sites in Turkey are at an acceptable level in terms of providing necessary information, preventing unnecessary transactions, user comments and mental ergonomics factors. However, it was evaluated that its usability

level was low in terms of alternative usage options factor. In addition to these factors, usability compatibility is high in terms of navigation elements, technical features and consistent content factors; In terms of factors such as content design, search and page design, usability levels were evaluated as low.

The scale developed within the scope of the study is important in terms of both evaluating and improving the existing e-commerce sites and being a guide for the e-commerce sites that are planned to be established. It also contributes to the information systems literature in terms of being a scale developed in the focus of e-commerce. However, testing the scale on foreign e-commerce sites and expanding it to include mobile commerce and social commerce contexts that have become an important part of today will increase the widespread impact of such studies.

5. CONCLUSION & RECOMMENDATIONS

Digital change is the process of transitioning to new ways of doing business and thinking that add value to customers by using digital, social, mobile and new technologies, enable the development of business processes and allow companies to increase their competencies. Digital marketing; It is exposed to change much faster and different than the rate of change of customers, companies, industries and value chains. This change manifests itself in companies' business models, strategies, products and services, decision-making processes, customer experiences, organizational structures and collaborations. Thanks to the rapidly developing technology, today's digital world offers the opportunity to access information, products and services at a much faster level thanks to many channels compared to the past. When smartphones and tablets occupy an important area in people's lives, the combination of these tools with applications such as social media, mobile applications and advanced analytical capabilities allows consumers to access unlimited information that they can use while performing their purchasing and ordering activities (Smith 2011, p.492).

In addition to focusing on internet marketing, digital marketing generally uses other channels that do not require internet use. It also benefits from technological tools such as fixed phones, mobile phones, mms and sms, banner ads and digital open space, and supports the direct participation of consumers in products and services (Chaffey et al. 2013, p.337).

In addition to being a traditional brand in companies, efforts to create a digital brand image and increase brand value are of great importance in the current period. Companies that benefit from the opportunities provided by the digital environment, reach large masses through these channels, promote their products and services, perform sales and orders, manage after-sales customer relations, and offer opportunities for customers to easily convey their ideas (Wymbs 2011, p.95).

Traditional marketing has begun to lose its effect day by day. Developing technology has changed people's living standards as well as their purchasing and consumption habits. It

has become increasingly difficult for businesses to differentiate and be noticed. Realizing this change, companies have tended to reach their target audiences faster and to transfer a large part of their advertising expenditures to this area through digital channels. In some cases, it may be more effective to identify and communicate with the right audience instead of addressing large audiences. Since the measurability feature of digital marketing is higher than traditional marketing, companies have started to focus on digital marketing activities. Digital marketing offers two important advantages to companies. It can be done for the targeted audience and the achievement of actions and goals is measurable. The meaning of digital marketing arising from these gains is increasing day by day for companies (Royle and Laing 2014, p.68).

In addition to many advantages, digital marketing also has disadvantages for both businesses and consumers. The first of these, and from the point of view of the enterprise, is stated as copyright. Due to its nature, digital marketing campaigns prepared by businesses can be easily copied, imitated by rival businesses, and even brand names and logos can be copied (Safko 2009, p.190).

Since it is an internet-based marketing activity, disruptions and disconnections that occur on the internet sometimes cause the customer to lose a lot of time and disrupt the fun structure of digital marketing (Tudor 2016, p.51).

Unfortunately, digital channels are not an attractive channel, especially for older generations who like to shop through traditional channels, as they do not allow touching or examining products without purchasing them (Taken 2012, p.90). Due to the fact that card information is copied, stolen, sold, etc., it cannot fully create a sense of trust and frightens individuals at the point of digital money transfer because 100 percent security cannot be provided (Wind and Mahajan 2002).

In addition to changing the way companies communicate with their customers, social media has also created great changes in the way business steps are made. Companies have begun to use social media tools increasingly to communicate with their current customers, to gain potential customers, to give confidence to their customers, to protect their brand

awareness and image (Mills 2012). Today, social media is a platform that connects businesses directly with their customers and offers marketing opportunities. Social media provides opportunities for businesses to communicate directly with larger audiences without time constraints, with a much lower cost than traditional marketing tools (Kaplan and Haenlein 2010, p.62).

Social networks have a place as a unique supporting element in communicating and disseminating marketing messages, realizing product presentations and managing brand images. Social networks are for 'networking'. Social networks are an old-fashioned way of networking that allows people to connect and get to know each other better. For businesses, this means building new relationships with potential customers and increasing the sales rate of their products thanks to existing satisfied customers. The importance of the communication of businesses with their customers is related to creating the concept of trust with the customers, gaining the understanding of the customers, increasing the preference rates, providing reminders, creating awareness and persuading. For this reason, businesses give increasing importance to social media channels in developing relationships (Akar 2010, p.147). With the rapid development of technology, social media has had a great importance in the formation and development of brands. Businesses have started to develop new strategies through social media in order to market their product/service, brands and deliver them to target audiences (Berthon et al. 2012, p.265).

Today, consumers do more research online before deciding to purchase a product or service (Kim and Ko 2012, p.1481). Social media marketing is a pull strategy that allows consumers to access the brand, product or service they are interested in. The online audience group is used as the actual focus group. Conversations range from a wide range of blogs, opinion sites, and social networks. Businesses focus on social media marketing processes to run social media correctly and sustainably. Businesses maintain the social media marketing process in four basic steps. These; listening, connecting, measuring and optimizing. Listening reveals customers' satisfaction with the product or service, brand loyalty, product development and new product ideas, competitors' activities, and the status of market opportunities. It also enables businesses to understand their customers more deeply (Dholakia and Bagozzi 2001, p.167). In listening, one of the advantages of

examining customers' conversations from a qualitative perspective is that all relevant online conversations are examined in their own contexts by establishing a cause and effect relationship (Miranda et al. 2016, p.310).

Brand loyalty means that the consumer develops a positive attitude towards a certain brand, buys the brand he is affiliated with frequently, continues to buy and uses that brand for a long time (Odabaşı and Barış 2002). Today, consumers are faced with many choices while making their brand choices. While choosing between brands, they exhibit purchasing behavior at the stage of choosing the brand that will provide them the most benefit. The level of satisfaction created by meeting the needs, wishes and expectations of the consumers also affects the level of loyalty towards the brand. Businesses should be very careful in activities and activities aimed at increasing customer loyalty on the pages they create for their brands in social networks. Activities in social media are effective in creating loyalty for consumers (Hacıefendioğlu 2014, p.61). Businesses aim to be remembered and establish emotional bonds during decision-making by entering the minds of consumers. For this reason, businesses use new methods and tools. Social media is one of the tools used by businesses for these purposes (Özmen et al. 2013).

Social media measurement is defined as monitoring the social media activities of the companies in line with the targets they have set and measuring the performance of these activities. Collecting and measuring data in different areas of social media platforms gives companies the chance to have more information about their customers' decision processes and what is going on in social media (Özata 2013).

In the optimization phase of social media marketing, businesses should go to the ways of establishing long-term active relationships with customers. Knowing what the consumer wants and how effective the offered solution is provides important feedback to businesses. By optimizing these communication efforts, businesses return to the initial process, namely the "listening" stage, and repeat the process (Dholakia and Bagozzi 2001, p.165).

5.1 CONCLUSION

Within the scope of this study, a scale was developed to evaluate e-commerce web pages in terms of usability. In the first part of the scale, it is seen that the most effective factor in the usability levels of the sites is the data entry opportunity offered to the users. This may be because users feel that they are cared for and that their opinions are valued. When designing shopping sites, care should be taken to provide such opportunities. At the same time, in this section, it is seen that the small feedback in the form of warnings and frequently asked questions provided by e-commerce sites are of the least importance in terms of usability. This reveals the necessity of providing specific feedback rather than general, while designing e-commerce sites.

When the second part of the scale is examined, the most important factors such as consistency of the pages of the site, well-organized links and legibility of the page are seen as the most important factors, followed by the easy and understandable use of the site. These results may be due to the fact that users do not want to encounter different products on their way to reach the product they are looking for and they want to move easily on this path. The least important factor that emerged in the second part was the simple search options on the site. Here, too, it can be said that the users expect the opportunities offered to be more special.

In the end, this study, in which the usability criteria of e-commerce sites were determined, showed that the expectations of users from e-commerce sites were mostly to meet their individual needs and that all kinds of opportunities offered should be in this direction. It is clearly seen that this situation should be taken into account in the design of e-commerce sites and that general approaches should be avoided.

As a result, as a result of the evaluation of five different e-commerce sites by five users during the application phase of the developed scale, the deficiencies of the most preferred e-commerce sites in Turkey in terms of usability were observed in line with the answers given to the 1st part and 2nd part items in the scale.

On the sites in the marketplace e-commerce category; The inadequacy of specifying the fields that must be filled in the forms within the site, the absence of a virtual keyboard, the absence of an alternative environment such as a screen reader, especially for disabled users, the absence of customer comments, the inability to resize the font size and the lack of a frequently asked questions section negatively affect the usability of the e-commerce site. as affecting. In addition, the least considered usability factors for this category are; It has been observed that there are alternative usage options, mental ergonomics and user comments. The inconsistency in the design of the links on the site is another striking element. Among the factors given within the scope of the scale, it was determined that the content design, homepage and in-site search factors were less compatible than the others.

According to the findings in the entertainment & culture e-commerce categories, it was concluded that the font size could not be readjusted and there was no media alternative. It has been observed that the alternative use options factor is more inconsistent than the other factors. The inconsistency of the title tags and the inconsistency of the link designs on the e-commerce site were evaluated negatively in terms of usability, albeit slightly. Consistent content, homepage and in-site search factors were observed to be less compatible.

In the e-commerce category with electronic products; The main usability deficiencies are the inability to resize the font size in the texts and the lack of media alternatives. It was determined that the link labels of the item with the lowest mean value were not selected meaningfully. It has been observed that the technical characteristics factor is among the evaluation factors given within the scope of the scale.

When the findings obtained in the application of the scale are evaluated in general, it is seen that the most preferred e-commerce sites in Turkey are at an acceptable level in terms of providing necessary information, preventing unnecessary transactions, user comments and mental ergonomics. However, it has been evaluated that the usability level is low in terms of alternative usage options factor. In addition to these factors, usability compatibility is high in terms of navigation elements, technical features and consistent

content factors; In terms of factors such as content design, search and page design, the usability levels were evaluated as low.

5.2 BUSINESS IMPLICATIONS

Businesses use some tools to maintain their social media marketing activities effectively. These; social media monitoring, social bookmarking and tagging, social measurement and reporting, social customer relationship management (hereafter CRM) and blog marketing.

Social media, which continues to develop and be used more widely today, has gained a lot of importance for both individuals and brands. For this reason, it has become very important to follow social media. While social media enables companies to communicate directly with consumers, they enable them to do so at much lower costs than traditional communication tools (Kaplan and Haenlein 2010, p.65). In order to attract more customers and increase existing customer relations, businesses create brand awareness by opening accounts on behalf of the business on social media platforms such as Facebook and Twitter, strengthen their connections with their customers, establish new business partnerships, provide information about products and services and share on social media sites. it also affects behaviors (Barker et al. 2012, p.186).

To users; Services that provide the services of storing, organizing and sharing the sites they frequently use are called "social bookmarking sites" (Dholakia and Bagozzi 2001, p.168). The biggest benefit of social bookmarking is; is to present the links of the products and services on the sites and the pages with similar content to the sharing and appreciation of the users. These sites contain links that users like and want to share with other users. In social tagging, it is a link to a person, page or place in posts such as photos or status updates (Xiang and Gretzel 2010, p.182).

For brands, it is not enough to open an account on social networks and communicate with their customers from there. They need to do in social measurement and reporting. Being informed about what is being talked about on social networks and taking action if

necessary is also an indispensable stage of social media use for businesses. At this point, businesses need to make different measurements. In line with the measurements and analyzes made, companies can incorporate social media measurements into their corporate structures. In addition, these measurements provide an opportunity to determine the behavior of consumers in the purchasing process, to measure the demographic situation, to understand the strengthening of brand value and to understand the level of corporate reputation, and to determine the return on the investment made (DiStaso et al. 2011, p. 329).

Social CRM encourages engagement among various stakeholders to support sales and marketing. It is a philosophy and business strategy supported by a technology platform and business rules, workflow and so on. Social CRM has significant benefits on each functional area of business. It helps to interact with the customer and provide better customer experience. Social CRM is the company's response to customer speaking ownership (Rohra and Sharma 2012, p.3).

The increase in consumer blogs sharing their thoughts about products and services online has made consumer blogs an effective marketing activity and "blog marketing" has become an important part of it.

has led to its use as a social media tool. In line with these developments, companies want to establish an effective dialogue with their consumers by opening their own blog pages (Wright 2006). Thanks to blogs, businesses increase their visibility and awareness before their internal and external customers. Large or small companies can reach their customers directly and engage in two-way marketing communication. Blogs also help companies obtain information that they can consider in their decisions.

There are four main types of blogs. Personal blogs are blogs made individually over the internet. Thematic blogs are blogs written and edited by an expert on a specific topic. Community blogs are blogs written by blog members who are members of that community according to certain criteria. Corporate blogs are blogs where companies

present their news to the public in a more sincere manner (Chiang and Hsieh 2011, p.1247).

The most important issue among promotional activities in marketing is to communicate with current and potential customers without time and place restrictions and to increase brand awareness. In line with these purposes, one of the tools that businesses can use to reach their goals is social media platforms (Barutçu and Tomaş 2013, p.12). In addition to traditional media tools such as television, radio, magazines and newspapers, businesses today have enabled social media platforms to establish effective marketing communication with social media tools that offer the opportunity to interact with consumers (Dholakia and Bagozzi 2001, p.167). Apart from traditional media tools, social media tools have brought a new perspective to the marketing approaches of companies. The innovations and features offered by the Internet include differences from traditional media tools. It also provided opportunities for social communication and relationship building, as well as direct communication between individuals and institutions. Social media tools also offer opportunities to businesses for sales promotion activities. Businesses can choose a target audience for their sales promotion activities and special campaigns can reach the target audience thanks to social media (Köksal and Özdemir 2013, p.325).

Social networks create significant opportunities and opportunities for businesses for their commercial and economic activities. Businesses can increase the popularity of their websites and services by sharing information and prices about their products and services (Lea et al. 2006, p.125). Social media tools provide opportunities for businesses to strengthen their relations with consumers and to increase the degree of sincerity. Thanks to this, businesses can influence their current and potential customers and increase their brand loyalty (Davis et al. 2010, p.42).

Companies using social media platforms can communicate with people interactively and direct them to positive thoughts about their brands. As these people recommend the brand to other users on social media and share their experiences, it also influences the purchasing behavior of other social media users (Aytan and Telci 2014, p.2). The fact that social media platforms are a part of consumers' lives today creates important

opportunities for companies. It is not a necessity for companies to use social media, but it is also valuable in terms of strengthening their brand image and providing prestige (Dholakia and Bagozzi 2001, p.167). It is known that businesses can generate income by advertising in the online community, and virtual communities are an effective source for strategic decision making. Thanks to this, customer relations are developed, consumer behaviors can be interpreted and customers' participation in new product development processes can be realized (Akar 2010).

The scale developed within the scope of the study is important both for the evaluation and improvement of existing e-commerce sites and for being a guide for the e-commerce sites planned to be established. In addition, information systems contribute to the literature in terms of being a scale developed with the focus of e-commerce. However, testing the scale in foreign e-commerce sites and expanding it to include mobile commerce and social commerce contexts, which have become an important part of today, will increase the widespread impact of such studies.

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