

## Opinions of University Students about Mobile Advertising: A Field Study in Turkey

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### ABSTRACT

Mobile advertising is a publicity stunt performed on mobile phones or other mobile devices. The study aims to measure university students' attitudes towards mobile advertising. For this, the sub-dimensions of entertainment, irritation, informing and reliability of the mobile advertisements have been evaluated. It is the purpose of the research to search for answers to the questions whether age, gender, education level, monthly expense and phone usage duration affect mobile ads. The hypotheses suggested in this study were tested through t-test, ANOVA test, correlation analysis which was applied to the questionnaire data. In this study, there was a significant positive correlation between entertainments and informing dimensions of mobile advertising; there was a significant positive correlation between admission and reliability dimensions; there was a significant positive correlation between information and reliability dimensions, but a significant negative correlation between admission and irritation. Also, there was no significant correlation between irritation and information, irritation and reliability dimensions of mobile advertising. This study was conducted to analyze the attitudes of male and female students at a state university in the Southeast Anatolian Region towards mobile advertising. The fact that such a work has not been encountered in this region reveals the originality of this work.

**Keywords:** Advertising, Mobile Advertising, Mobile Advertisement Types

### INTRODUCTION

The internet has become an indispensable necessity in our life because of the point where the present technology has arrived. The internet service, which provides communication with people living in different continents and countries, naturally has a significant share in the commercial field. The commercial activities that developed on the internet have improved the internet advertising. The popularity of internet advertising has increased because of the costly advertising services provided by the media such as newspapers, magazines and television, and because of the limited audience reach. Many leading brokerage firms such as the renowned Google Ad Words have facilitated the consumers to reach to businesses with a variety of options and advertising delivery. One of the most common methods used by these companies is ad toolbars, which are placed in various places on the website pages and where the content of the advertisement is automatically determined according to the products the user is looking for on the internet. The phones which are called as smart phone are a cheap and easy way to access the internet that people use in

everyday life, which has given the mobile advertising sector a different dimension. The curiosity and research motive of human beings from the past to the present has increased the rate of internet usage in smart phones, which are all under our control and which we cannot give up. Increased use of the internet and the arrangement of internet pages to be compatible with smart phones have also caused companies that publish advertisements to work to offer more options for smart phones. Since the screens of smart devices are small in size compared to computer screens, it has caused the opening of internet pages to be arranged to cover the screens of smart phones or to be embedded within the contents of mobile-compatible internet pages instead of ads placed in various places on internet pages when mobile advertising is accessed via computer. These full-page ads are aimed to reach the consumers through various methods such as internet page opening, after a certain period of time on the internet page or after a link that is clicked on the internet page. Besides, the products consumers are looking for on the internet in smart devices and the words they enter are automatically

related to the products and words that are searched for the advertising content. The companies that broadcast advertisements also aim to reach more consumers by broadcasting advertisements through many applications used in smart phones.

A different dimension of mobile advertising is that companies that provide advertising pay a fee to the owners of internet pages. Under the circumstances, many web pages have aimed to increase their revenue from advertising by placing more ads on their pages. The higher the number of ads being delivered, the more difficult it is for people to reach the content on the internet. The revenue generated from the ads is directly proportional to the number of impressions and clicks on the advertised ads, making it impractical for users to click on the ad to reach the content, and it has a negative impact on the users' thoughts towards the advertisers. Although advertising companies are trying to prevent this kind of enforcement, they have not been effective on the internet, which is a huge global structure.

The fact that mobile advertising is widely available and the direct contact with the manufacturer for online shopping make it possible to reach more affordable prices without the intermediary of the requested products and services. The diversity and affordability found on the internet have caused a considerable increase in online shopping. At the same time, the fact that the volume of trade done on the internet is high and the products and services that are desired to be received are seen only in the virtual environment. The beginning of these questions is whether the products and services received are real or not. Another problem is that consumers do not want to use their bank account information or card information as payment method due to the increase of virtual fraud incidents. Consumers on the internet, which is an extensive communication network, share experiences about a site or sites that are desired to be shopping, which is also useful in shopping via the internet. A very different dimension of mobile advertising is ads that are delivered via mobile messaging and mail. Mobile messages and mail-delivered advertisements can be private to individuals as well as the public. Since the percentage of mobile messages addressed to users is higher, it is one of the more common methods. When prices are discounted on products or services or when campaigns are delivered to consumers via mobile message and mail, consumers are prompted to review the

product or service even if they do not make a purchase. At the same time, over-the-air mobile messages and emails of companies that broadcast advertisements cause consumers to be frustrated or blocked. Of course, it is not right to say the same thing for all advertising companies. Special discounts, gift codes and informative messages provide positive feedback to the companies that broadcast their advertisements by making consumers happy. Even consumers who find the messages of some advertisers entertaining and funny and want them to continue by giving feedback or doing shopping because of this message that makes them happy. This study aims to show university students' views on mobile advertising. This work is genuine concerning implementation since no such research has been found in the Southeastern Anatolia Region.

### LITERATURE REVIEW

In particular, 1970's since the year Turkey's advertising industry has entered into a significant advance. With color televisions in the 1980s and the opening of private television channels since 1989, the television has dominated over 40% of the total advertising pie. The advertising band on TV channels is increasing day by day (Arioğlu, 2010: 16). As a result of recent technological developments, media tools are making a transition from traditional advertising to digital advertising. Digital mobile and online advertising together with TV and music downloads, watch-and-pay systems, online/mobile games and e-publishing are the essential elements of this process. All of this will lead to an increase in ownership rates and usage of internet and mobile devices (İspirand Suher, 2009: 5).

Advertising is the presentation of products, services, ideas and persons without face to face for a certain fee through a specific person or institution (Shaizade, 2006: 43). Concerning consumer, advertising is a structure that helps consumers regarding time, describing products and services as well as being the most suitable tool among the millions of products that respond to their needs in the market and defining where, how and by what price (Çırpıcı, 2006: 5).

Advertising is an indispensable marketing communication tool, a complex, as a component of sales and relationship-oriented communication that businesses want to establish with their target customers. For this reason, new advertising tools are used to reach the target customers depending on technological

developments. The concept of mobile advertising has emerged, especially when mobile phones are used as advertising tools (Barutçu and Öztürk Göl, 2009: 26). Compared to traditional and internet based ads, mobile advertising has distinctive features such as personalization that can significantly enhance advertising effectiveness. For example, when compared to many commercials on traditional media, mobile ads can be customized to fit a consumer's needs better and improve customer relationships (Xu, Liao, and Li, 2008: 711).

Mobile advertising is defined as the use of interactive wireless media (mobile phones and pagers, cordless phones, personal digital assistants, two-way radios, baby monitors, wireless networking systems, GPS-based locators) to communicate advertising messages to promote goods and services to consumers (Haghirian and Madlberger, 2006: 216). The key to mobile advertising is the fact that it reaches consumers directly and without time constraints. It can also be customized according to the wishes and desires of the customer. Special messages can be sent to students, teachers, employees from all walks of life. Depending on the signals received by the GSM operators from the base stations, information can be given about the parking areas, the gas stations with special messages (Sert, 2012: 42). "Mobile advertising" allows customers to send ads to customers at a time when they shop, thereby increasing the chances of the ad being delivered. Moreover, advertisements can be tailored to specific customers according to their profile; these include information on preferences expressed regarding age, gender, lifestyle and products or services (Reyck and Degraeve, 2003: 509).

Sahin and Aytakin (2012) investigated the attitudes of students of Celal Bayar and Mersin University on information, irritation, personalization, reliability and entertainment dimensions of mobile advertising in the study of university students' attitudes towards mobile advertising on their permissive marketing axis. As a result of the research, it has been concluded that there is a significant difference between the two groups in terms of the dimensions of entertainment and irritation. Usta (2009) examined the attitudes of university students towards short messages in his study of university students' attitudes toward mobile advertising. As a result of the research, it has been seen that students generally have a negative attitude towards short messages. At the

same time, it turned out that students did not find text messages entertaining, informative and trustworthy. Karakaya (2013) aimed to examine the attitudes of university students towards text message advertising in mobile marketing in the graduate thesis on university students' attitudes toward mobile advertising. In general, there is a negative attitude towards SMS advertising, but, it was found that the attitudes are more positive if the permissions are granted for the ads.

### Mobile Advertising Types

Mobile ads are classified into three groups according to their characteristics: SMS, MMS, and Bluetooth. MS (Short Message Service \ Short Message Service) is the short name for sending and receiving text messages via mobile phones over GSM networks. In addition to 160 characters of information in a message, logo, melody or messages intended to increase the use of the mobile phones can also be sent. The most important reason why SMS messages are preferred in the advertisement field is that the message is stored and sent, allowing the message to reach the information that has been delivered. However, the most important disadvantage is delivering limited information, and not being able to send voice and video messages (Barutçu and Öztürk Göl, 2009: 30).

MMS (Multimedia Messaging Service) is the transmission of messages containing graphics, animations, photographs, melodies, voice recordings and texts to mobile devices via GSM networks. In other words, MMS is a form of adding messages such as pictures, graphics, and videos to SMS. It is more creative and more effective because of these reasons (Altuğ and Yürük, 2013: 14). Bluetooth is a technology that enables wireless data and voice communication over short distances, allowing it to work seamlessly with all devices in the area of wireless communication. It is a low-cost, low-power, short-range radio technology and takes the place of the cable to communicate between communication devices such as headsets, PDAs (Personal Digital Assistants) and laptops. Bluetooth communication takes place in the ISM band (frequency band devoted to industrial, scientific and medical applications) and 2.4 GHz, which do not require a license (Özçelik, 2006: 8).

### Content Properties of Delivered Messages in Mobile Ads

The entertainment side of mobile advertising is to satisfy the need for entertainment by relaxing

the consumer. Visual presentations, games, and music can be used as mobile advertising applications to fulfill the need for entertainment. One of the most critical factors affecting the attitude of the consumer is entertainment (Külter Demirgüneş and Avcılar, 2017: 1223). The informational side is an effective way to improve the usability of mobile services and applications, to adapt the content and presentation of the service to each user and current usage conditions. In this way, the amount of user interaction will be minimized. The user can quickly access the information or services needed in the context of the current usage. This information can also be given to the user automatically (Kaasinen, 2003: 70). The irritation side has a significant influence on the attitude of people towards advertising when they are treated with injustice. "Consumers will perceive this as an undesirable and disturbing effect when commercials use annoying, disturbing, derogatory or overly manipulative techniques. Consumers will perceive this as an undesirable and disturbing effect when commercials use annoying, disturbing, derogatory or overly manipulative techniques. "Mobile advertising can provide a range of information that confuses and distributes the buyers. Consumers can be confused about themselves and react negatively (Haghirian, Madlberger, and Tanuskova, 2005: 4). From a customization standpoint, marketers can tailor SMS advertising to the consumer's local time, location and personal preferences. SMS ads are less "invasive" than phone calls. Buyers can choose to read them in their spare time later. However, enterprises still have to adjust the sending time very well. For example, care should be taken that the advertisement is not sent to consumers before a certain hour in the morning or after a certain hour in the evening. Or even consumers who can approach the adverts moderately can react negatively (Karakaya, 2013: 25). Advertising credibility is that consumers generally perceive the authenticity and credibility of advertising. The reliability of an advertisement is influenced by different factors, primarily by the company's credibility and the carrier of the message. The reliability of messages sent to mobile devices can also affect the attitude towards advertising (Chowdhury et al., 2006: 37).

### RESEARCH METHODOLOGY

In this study, which aims to reveal university students' opinions about mobile advertising, the collected data regarding the scale was analyzed

first. Then hypothesis tests were applied. SPSS 23.0 and AMOS 21.0 package programs were used in the analysis.

### Research Universe-Sampling and Collection of Data

In the study, questionnaires were used from data collection methods. The questionnaire consists of two parts. In the first chapter, questions about demographic information were asked. In the second part, a total of 25 questions were asked including six related to entertainment in mobile ad, six related to irritation, six about informing, four about reliability and three about personalization. Convenience sampling method was applied in the research.

A scale developed by Ma et al. (2009), Tsang et al. (2004), Ducoffe (1996) and MacKenzie and Lutz (1989) for mobile advertising content is included in the research. The universe of the research consists of students from a state university in the Southeastern Anatolia Region. There are approximately 20,344 students enrolled in university departments and programs. The sample size was calculated as 378 participants under the consideration of a 5% margin of error within the 95% confidence limits of the universe. Questionnaire forms sent to 430 students and 398 forms returned. Eleven forms of the review made were excluded from analysis due to sloppy filling and voiding and the analysis and continued with 387 participants.

### Research Hypotheses

The hypotheses formed in the light of the stated purpose and theoretical explanations are as follows:

H<sub>1a</sub>: There is a significant positive difference between the entertainment dimension of mobile ads and gender.

H<sub>1b</sub>: There is a significant positive difference between the irritation dimension of mobile ads and gender.

H<sub>1c</sub>: There is a significant difference between the informational dimension of mobile ads and gender in the positive direction.

H<sub>1d</sub>: There is a significant difference between the reliability dimension of mobile ads and gender in the positive direction.

H<sub>2a</sub>: There is a significant difference between the entertainment dimension of mobile ads and age in the positive direction.

H<sub>2b</sub>: There is a significant difference between the irritation dimension of mobile ads and age in the positive direction.

H<sub>2c</sub>: There is a significant difference between the informational dimension of mobile ads and age in the positive direction.

H<sub>2d</sub>: There is a significant difference between the reliability dimension of mobile ads and age in the positive direction.

H<sub>3a</sub>: There is a significant difference between the entertainment dimension of mobile ads and education in the positive direction.

H<sub>3b</sub>: There is a significant difference between the irritation dimension of mobile ads and education in the positive direction.

H<sub>3c</sub>: There is a significant difference between the informational dimension of mobile ads and education in the positive direction.

H<sub>3d</sub>: There is a significant difference between the reliability dimension of mobile ads and education in the positive direction.

H<sub>4a</sub>: There is a significant difference between the entertainment dimension of mobile ads and monthly expense in the positive direction.

H<sub>4b</sub>: There is a significant difference between the irritation dimension of mobile ads and monthly expense in the positive direction.

H<sub>4c</sub>: There is a significant difference between the informational dimension of mobile ads and monthly expense in the positive direction.

H<sub>4d</sub>: There is a significant difference between the reliability dimension of mobile ads and monthly expense in the positive direction.

H<sub>5a</sub>: There is a significant difference between the entertainment dimension of mobile ads and the duration of phone use in the positive direction.

H<sub>5b</sub>: There is a significant difference between the irritation dimension of mobile ads and the duration of phone use in the positive direction.

H<sub>5c</sub>: There is a significant difference between the informational dimension of mobile ads and the duration of phone use in the positive direction.

H<sub>5d</sub>: There is a significant difference between the reliability dimension of mobile ads and duration of phone usage in the positive direction.

44.7% of the participants were female, and 55.3% were male. When the distribution of the participants according to age was examined, 1% was 17 years old, and below, 35.9% was 18-20 years, 46.5% was 21-23 years, 12.9% was 24-26 years, 3% 6 is 27 years and above. When the educational status is examined, it is determined that 11,4% of them are two-year degree, 84,5% of them are undergraduate, 3,4% of them are master degree and 0,8% are doctor's degree. When the faculties and vocational schools participating in the research are examined, the highest attendance rate is science and literature by 29,2 %, 20,7% for faculty of economics and administrative sciences and minimum participation 0,3% for land registry cadastre. Monthly expenditures of the participants are 5,7% 100TL and below, 11,4% 101 - 250TL, 34,1% 251 - 500TL, 24,3% 501-750TL and 24,5% 751TL and above. When the duration of phone usage was examined, it was found that 43.4% of them were between 6-10 years and the minimum were 16 years and more by 5.9%.

In this study, exploratory factor analysis was performed for the scales collected, and the questions of B1, K1, K2, K3 were removed from the analysis. The scale was discovered with a four-dimensional structure and analysis with 21 items was continued. The Bartlett test ( $p = 0,000$ ) and the Keizer - Meyer - Olkin coefficient (0,901) were determined, and the number of samples for factor analysis was determined to be sufficient. When the questions in the dimensions are examined, it is understood that the questions in the first dimension are entertainment, the questions in the second dimension are irritation, the questions in the third dimension are informational, and the questions in the fourth dimension are reliability. The Cronbach's alpha coefficient of the entertainment dimension was 0.879, the Cronbach's alpha coefficient of the irritation dimension was 0.852, the Cronbach's alpha coefficient of the informational dimension was 0.833, and the Cronbach's alpha coefficient of the reliability dimension was 0.821. Also, confirmatory factor analysis was performed to determine whether the scale fits the obtained data and it was determined to fit the four-factor structure of the scale. The obtained goodness of fit index is presented in Table 2.

**Table1.** Mobile Advertisement Scale Goodness of Fit Index as a Result of Confirmatory Factor Analysis

$\chi^2 / df$	CFI	NFI	RMSEA
1,927	0,955	0,911	0,049

**RESEARCH FINDINGS**

**Demographic Findings**

When the information on the demographic characteristics of the participants was examined,

Hypothesis Testing

Table2. Examination of Perceptions of Entertainment, Irritation, Information, and Reliability regarding Gender

Variables	Gender	N	Mean.	S.D	t	P
Entertainment	Female	173	2,2254	,91141	-1,088	,277
	Male	214	2,3341	1,05279		
Irritation	Female	173	3,1119	1,12486	-,984	,326
	Male	214	3,2227	1,08252		
Information	Female	173	2,6786	1,01263	-,846	,398
	Male	214	2,7673	1,03618		
Reliability	Female	173	2,2240	,93233	-1,846	,066
	Male	214	2,4112	1,06108		

Examination of perceptions of entertainment, irritation, information, and reliability regarding gender is given in Table 2. There was no significant difference between the entertainment and gender ( $p = 0,277$ ), no significant positive difference between irritation and gender

( $p = 0,326$ ), there was no significant difference between information and gender ( $p = 0,398$ ) and there was no significant difference between reliability and gender in the positive direction ( $p = 0,066$ ).

Anova Analysis Results

Table3. Examination of Perceptions of Entertainment, Irritation, Information, and Reliability regarding Age Groups

	Age	N	Mean.	S.D	F	P
Entertainment	17 and below	4	2,13	0,644	2,763	0,027
	18-20	139	2,20	0,969		
	21-23	180	2,28	1,009		
	24-26	50	2,68	0,987		
	27 and above	14	1,92	0,805		
Irritation	17 and below	4	2,88	0,498	0,429	0,788
	18-20	139	3,09	1,159		
	21-23	180	3,23	1,126		
	24-26	50	3,19	0,900		
	27 and above	14	3,32	1,014		
Information	17 and below	4	2,30	1,039	2,195	0,069
	18-20	139	2,67	1,021		
	21-23	180	2,66	1,005		
	24-26	50	3,09	1,095		
	27 and above	14	2,97	0,887		
Reliability	17 and below	4	2,00	0,707	0,734	0,569
	18-20	139	2,29	0,982		
	21-23	180	2,30	1,018		
	24-26	50	2,44	1,110		
	27 and above	14	2,68	0,846		

Examination of perceptions of entertainment, irritation, information, and reliability regarding age groups are given in Table 3. According to the ANOVA test, there was no significant difference between the irritation and age variables ( $p = 0,788$ ), no significant difference between the information and age variables ( $p = 0,069$ ), and no significant difference between

reliability and age variables ( $p = 0,569$ ). The only positive significant difference ( $p = 0,027$ ) was found between entertainment and age group variables. According to the Tukey test, which was conducted to find the source of the difference, it aroused due to the difference between the average of the 18-29 age group and 24-26 age group.

Table4. Entertainment- Age Variable Tukey Analysis

Entertainment	Age Groups	Age Groups	Tukey
	18-20	17 and below	1,000
	21-23	0,962	
	24-26	0,029*	
	27 and above	0,842	

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**Table5.** Examination of Perceptions of Entertainment, Irritation, Information, and Reliability regarding Education

	Education	N	Mean	S.D	F	P
Entertainment	Two-year degree	44	2,62	1,109	1,917	0,126
	Undergraduate	327	2,24	0,981		
	Master	13	2,26	0,778		
	Doctorate	3	2,33	0,667		
Irritation	Two-year degree	44	2,98	1,032	2,378	0,069
	Undergraduate	327	3,17	1,115		
	Master	13	3,74	0,815		
	Doctorate	3	4,11	0,509		
Information	Two-year degree	44	3,04	1,014	2,375	0,070
	Undergraduate	327	2,67	1,033		
	Master	13	3,09	0,710		
	Doctorate	3	3,07	0,416		
Reliability	Two-year degree	44	2,72	0,930	2,672	0,047
	Undergraduate	327	2,27	1,020		
	Master	13	2,46	0,796		
	Doctorate	3	2,08	0,577		

Examination of perceptions of entertainment, irritation, information, and reliability regarding education is given in Table 5. According to the ANOVA test, there was no significant positive difference between, and entertainment and education ( $p = 0,126$ ), no significant positive difference between irritation and education ( $p = 0,069$ ), and there was no significant positive difference between information and education variables  $p = 0,070$ ). Only a significant difference ( $p = 0,047$ ) was found between reliability and education variable in a positive direction.

The difference according to the Tukey test, which is used to determine the source of the difference, is due to the difference between the two-year degree and undergraduate group averages.

**Table6.** Reliability - Education Variable Tukey Analysis

Reliability	Education Groups	Education Groups	Tukey
	Two-year degree	Undergraduate	0,031*
		Master	0,852
		Doctorate	0,715

**Table7.** Examination of Perceptions of Entertainment, Irritation, Information, and Reliability regarding Monthly Expense

	Monthly Expense	N	Mean.	S.D	F	P
Entertainment	100TL and below	22	1,97	0,738	1,536	0,191
	101-250TL	44	2,25	1,054		
	251-500TL	132	2,21	0,916		
	501-750TL	94	2,31	1,004		
	751TL and above	95	2,46	1,088		
Irritation	100TL and below	22	3,05	1,223	1,290	0,273
	101-250TL	44	3,30	1,080		
	251-500TL	132	3,02	1,099		
	501-750TL	94	3,23	1,099		
	751TL and above	95	3,30	1,080		
Information	100TL and below	22	2,43	0,836	1,596	0,175
	101-250TL	44	2,80	1,083		
	251-500TL	132	2,60	0,971		
	501-750TL	94	2,85	1,088		
	751TL and above	95	2,82	1,035		
Reliability	100TL and below	22	2,44	1,020	0,802	0,525
	101-250TL	44	2,41	1,144		
	251-500TL	132	2,22	0,927		
	501-750TL	94	2,31	0,943		
	751TL and above	95	2,43	1,111		

According to the ANOVA test, there was no significant positive difference between

entertainment and monthly expense variables ( $p = 0,191$ ), no significant positive difference

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between irritation and monthly expense ( $p = 0,273$ ) between information and monthly expense variables ( $p = 0,175$ ) and there was no

significant difference between reliability and monthly expense in the positive direction ( $p = 0.525$ ).

**Table8.** Examination of Perceptions of Entertainment, Irritation, Information, and Reliability regarding Duration of Phone Usage

	Phone	N	Mean.	S.D	F	P
Entertainment	1year and below	25	2,30	1,013	0,417	0,796
	2-5year	123	2,22	0,958		
	6-10year	168	2,27	0,997		
	11-15year	48	2,42	1,107		
	16year and above	23	2,39	0,910		
Irritation	1year and below	25	2,90	1,233	1,138	0,338
	2-5year	123	3,11	1,071		
	6-10year	168	3,18	1,125		
	11-15year	48	3,43	1,140		
	16year and above	23	3,20	0,802		
Information	1year and below	25	2,72	1,083	0,893	0,468
	2-5year	123	2,61	0,999		
	6-10year	168	2,75	1,034		
	11-15year	48	2,83	1,104		
	16year and above	23	2,99	0,864		
Reliability	1year and below	25	1,97	0,801	2,569	0,038
	2-5year	123	2,26	0,956		
	6-10year	168	2,33	1,037		
	11-15year	48	2,43	1,145		
	16year and above	23	2,84	0,807		

Examination of perceptions of entertainment, irritation, information, and reliability regarding the duration of phone usage is given in Table 8. According to the ANOVA test, there was no positive significant difference between entertainment and duration of phone usage ( $p = 0,796$ ), no positive significant difference between irritation and duration of phone usage ( $p = 0,338$ ), and no positive significant difference between information and duration of phone usage variables ( $p = 0,488$ ). The only significant difference ( $p = 0,038$ ) was found between the reliability and duration of phone usage in the positive direction. The difference according to the Tukey test, which was used to

determine the source of the difference, is because the averages of groups of 1 year and 6 years and over 16 years are different.

**Table9.** Reliability - Duration of Phone Usage Tukey Analysis

Reliability	Groups of Phone Duration	Groups of Phone Duration	Tukey
	1year and below	2-5year	0,683
		6-10year	0,443
		11-15year	0,334
		16year and above	0,024*

### Correlation Results

**Table10.** Results of Correlation Analysis

	Entertainment	Irritation	Information	Reliability
Entertainment	1			
Irritation	-,14**	1		
Information	,51**	,05	1	
Reliability	,46**	-,00	,62**	1

\*\* Correlation is significant at the 0.01 level (2-tailed).

Relationships between entertainment, irritation, information and reliability dimensions of mobile ads were investigated by correlation analysis and are presented in Table 10. According to the findings, there is a significant negative relationship between entertainment and irritation dimensions of mobile ads ( $r(387) = -.14, p < .01$ ). There is a significant positive correlation

between entertainment and information dimensions ( $r(387) = .51, p < .01$ ). There is a significant positive correlation between entertainment and reliability dimensions ( $r(387) = .46, p < .01$ ). There is a significant positive correlation between information and reliability dimensions ( $r(387) = .62, p < .01$ ). The presence of a positive relationship between variables

indicates that two variables have changed together. "Information and entertainment", "reliability and entertainment" and "reliability and information" are increasing or decreasing together. However, there was no significant correlation between irritation and information dimensions ( $r(387) = .05, p = .366$ ). There was no significant correlation between irritation and reliability dimensions ( $r(387) = -.00, p = .958$ ).

### CONCLUSION AND DISCUSSION

This study aims to investigate university students' thoughts on mobile advertising. For this purpose, data were collected from 387 students who were educated at a state university in Southeastern Anatolia Region. Significant results have been achieved as a result of the analysis made. It was seen that there was a significant difference in the positive direction between age groups and entertainment in the study and this difference was due to the difference between the age groups of 18-20 and 24-26. However, it has been determined that there is no significant difference between age groups and irritability, information and reliability in the positive direction. By considering this, it can be said that mobile advertising influences entertainment dimension and different age variables.

On the other hand, it has been found that there is no significant difference between gender and monthly expense, and between entertainment, irritation, information, and reliability. A significant difference was found between the duration of phone usage of university students and reliability of mobile ads in the positive direction. It has been seen that this difference is due to differences in the averages between 1 and 6 years and 16 years and above.

Generally speaking, reliability is not an immediate phenomenon, and as time passes, the sense of trust of the person becomes intense or disappears. It was also found that there was a significant positive difference between education levels of university students and the reliability dimension of mobile advertising, and this difference was caused by the difference between the two-year degree and undergraduate degree. In other words, it can be said that as the education levels of the people increase, the consciousness of reliability increases. As a conclusion, the reliability of mobile ads is also changing as the education levels of people and the length of time they use the phone because they are becoming more conscious. The correlation coefficient between advertising and

informational dimensions of mobile ads is positive. That is entertainment and information change together. Based on this, it can be said that mobile ads entertain as they inform and inform as they entertain. It can be said that they are being preferred because they give information to the people and are not boring when doing so. If they are not entertaining when they inform, incoming messages are directly subject to deletion by people and even blocked. Advertisers, in particular, should take these into account. The correlation coefficient between entertainment and reliability dimensions of mobile ads is found to be positive.

These ads are also reliable when providing information to people. It is a known fact that if people do not find mobile ads safe, they delete them directly and stay away. Trusted messages are read and recommended. Also, if the incoming messages are reliable, both the interests of the people who are advertised and the sales of the products increase. Already, when untrustworthy ads are figured out, there is less interest in the advertised product.

The correlation coefficient between information and reliability dimensions of mobile ads is positive. Placed mobile ads are both informative and reliable. This ensures that people are more sensitive to mobile advertising. It is essential that the mobile ads from any product be informative about that product, that is, how well it can promote that product. Because of being reliable, these messages are read firstly. When mobile ads that give false information about products are understood, there is mistrust against both product and presented mobile ad. The result of the correlation coefficient of the irritation and information dimensions of mobile ads is not found to be significant. In other words, it can be said that the irritation and information dimension of mobile ads do not affect one another. When the other studies in the literature were investigated, it is found that generally, the result shows that mobile ads are not reliable. Doğaner and Kuyucular (2017) concluded that mobile advertising is not entertaining and irritating but dependable, when they were trying to investigate the effect of mobile advertising activities on consumer perception. In line with this study, mobile advertising has been found to be irritating in our research. Similarly, in his research regarding college students, Karakaya (2013) concluded that mobile advertising is not entertaining and informative, but the opposite is disturbing.

Sahin and Aytekin (2012) have also concluded that mobile advertising is not reliable. It may be suggested to researchers and practitioners to conduct new researches in different regions, different schools and with different age groups.

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