USAGE OF
CURRENT MOBILE MARKETING SERVICES
AND EVALUATION OF POTENTIAL FUTURE APPLICATIONS

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Usage of
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and Evaluation of Potential Future Applications

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ABSTRACT

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Mobile technology develops and penetration of mobile phones increases all around the world. Developments in mobile communications affected other business areas, like marketing. A new era has been opened with the development of mobile phones. Not only mobile handsets enable phone calls and Short Message Services (SMS), but also they are very personal devices that has unique users. That is why mobile is very popular as a communication channel. Users are very addicted to their handsets and position them in the center of their lives. The aim of this study is to present innovative mobile marketing applications and search the factors which affect users' attitudes toward present mobile marketing applications, and to determine user acceptance of innovative future mobile marketing services. Data have been collected from 350 mobile phone users and have been analyzed by using correlation, multiple regression, cluster, ANOVA and T-Tests. Results of analysis determine which mobile marketing applications are popular and how users can be categorized into three clusters. Besides, this study shows the relationship between mobile marketing applications and characteristics of mobile marketing, as well as the effect of 3G usage and mobile Internet usage.

KISA ÖZET

Güncel Mobil Pazarlama Servislerinin Kullanımı ve Potansiyel Taşıyan Uygulamaların Değerlendirilmesi

Berna Akın

Dünya çapında mobil teknoloji gelişmekte ve cep telefonu kullanımı artmaktadır. Bu gelişmeler, başta pazarlama olmak üzere diğer iş alanlarını da etkilemektedir. Cep telefonları sadece ses ve SMS (Kısa Mesaj Servisi) gibi servislerden faydalanmaya imkan vermezler, aynı zamanda tek bir kullanıcıları olduğu için çok kişisel cihazlardır ve iletişim kanalları arasında çok popülerdirler. Kullanıcılar, cep telefonlarına çok bağımlıdırlar ve onları hayatlarının merkezine oturtmuşlardır. Bu çalışmanın amacı, yenilikçi mobil pazarlama uygulamalarını sunmak, güncel uygulamalara yönelik kullanıcı tutumunu hangi faktörlerin belirlediğini araştırmak ve yenilikçi mobil pazarlama uygulamaları ve servislerini kullanıcıların ne derece kabul edeceğini belirlemeye çalışmaktır. Bu amaçla, 350 adet mobil kullanıcıdan veri toplanmıştır ve korelasyon, çoklu regresyon, kümeleme analizi, ANOVA ve T-Testi analiz yöntemleri kullanılarak çözümlenmiştir. Elde edilen sonuçlar, hangi mobil pazarlama servislerinin daha popüler olduğunu ve kullanıcıların daha fazla tercih ettikleri mobil servislere göre üç ayrı grupta nasıl kümelenebildiğini ortaya koymuştur. Bu çalışma ayrıca mobil pazarlama uygulamalarına karşı kullanıcıların tutumunu ve mobil pazarlama özellikleri arasındaki ilişkiyi; 3G ve mobil Internet kullanımının etkilerini ortaya koymaktadır.

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CONTENTS

FIGURES

TABLES

ABBREVIATIONS

SMS	Short Message Service
MMS	Multimedia Services
LBS	Location Based Services
IVR	Interactive Voice Response
AR	Augmenter Reality
GPS	Global Positioning System
CoO	Cell of Origin
MMA	Mobile Marketing Association

CHAPTER 1

INTRODUCTION

Marketing is positioned in the center of commercial activities and has gone through several evolutions from printed media advertising and telemarketing, to broadcasting media advertising like radio or TV. As personal computers and Internet expanded and became ubiquitous, novel kinds of opportunities increased, which provide reach to customers. Traditional advertising with primary Internet advertising focused on mass communication with customers, while in recent years' approaches like direct marketing started to be found more affective and profitable (Nowak & Phelps, 1997 c. f. Oh & Xu, 2003).

Evolution of mobile communication devices occurs in 1990's, in developed countries. It was only 1997 that the usage of mobile phones was 215 million people all around the world. This quantity grew up to 961 million in 2001 and 1.16 bio in 2003 (Bauer et al, 2005). Penetration of mobile phones has almost reached 50% by the end of 2007. This ratio is 33% in Asia and 25% in Africa (International Telecommunication Union, 2009).

Development of mobile phones opened a new era in communication. Mobile phones are used not only for voice services like making phone calls, but also for Short Message Services (SMS), Multimedia Services (MMS), access to data, etc. Besides, mobile phones are very personal devices for their users. That is the reason why mobile phones and PDAs are so popular in the means of communication channel. Compared to other channels, campaign responses are significantly higher and it is more possible to analyze feedback (Mobile Marketing Association, 2008b). Users are very addicted to the

flexibility of their mobile devices. Besides, mobile users are so hooked onto their devices that, they can not imagine their lives without having their mobile phones or PDAs, MP3 players, digital cameras, etc. (Ratsimor et al, 2003).

Tähtinen (2006) mentions that importance of mobile advertising arose with the improvement of mobile technology, and adds that marketers do not use only SMS but also the usage of MMS in mobile commercial communication increased. Pousttchi & Wiedemann (2006) support these with explaining that mobile handsets are considered as extremely encouraging marketing channels because they enable taking attention and getting time of customers.

Development of mobile communication devices has a direct effects on other business areas some of which is marketing, with mobile marketing concept (Ktoridou et al, 2008). With the growing popularity of cell phones as well as other mobile devices, new marketing possibilities are opened up (Sultan & Rohm, 2005). Mobile marketing is defined as, any form of marketing, advertising or sales promotion activity aimed at consumers and conducted over a mobile channel (Mobile Marketing Association, 2003 c. f. Salo et al, 2008). However, the concept is sometimes confused with mobile advertising and/or mobile commerce. Mobile marketing is defines as bein two-way marketing medium, interactive channel to drive sales (Karjaluoto et al, 2004 c. f. Tähtinen, 2006). It is also defined as an innovative form of commercial communication. It is mentioned as being a personal, ubiquitous, interactive, localized and dialogue-oriented communication (Bauer et al, 2005b c. f. Tähtinen, 2006). As well as these features; convenience and instant connectivity provide mobility and being able to be reached, enable obstacles of geographical position is made away with (Ktoridou et al, 2008).

Continuous development of mobile marketing depends on many facts. For instance, mobile handsets are becoming more and more extensive all around the world. Not only the amount of mobile phones increases, but also the qualifications of handsets improve. Besides the specifications, connectivity speed is consistently increasing (Ex: 3G). Mobile marketing is attractive for marketers because it is ubiquitous, responsive to context and it is controllable (Pousttchi & Wiedemann, 2006). Being interactive is another important feature of mobile marketing, because it is crucial to enable users reply to a mobile marketing message immediately. Mobile phone holds all the specifications that are needed for a close dialogue between brands and consumers (Jin & Villegas, 2008). It is possible not only to build brand awareness and change brand image; but also to promote sales, generate brand loyalty, and build customer database (Pousttchi & Wiedemann, 2006). However, it is important to bear in mind that; familiarity of mobile marketing depends on age, gender and educational level of users (Ktoridou et al, 2008).

Applications like sending advertising content are a part of mobile marketing but the most attractive and efficient part is the possibility to track user responses. All user responses to advertising messages are tracked and are saved in a data warehouse for future analyses. Advertisers are able to see the rates of response, and possible subsequent customer actions, even before the campaign finishes. By this, adaptation to user response is possible, as well as re-segmenting or changing the campaign (First Hop, 2007).

Ability of determining the consumer preferences provide feedback for brands and companies, and opportunity to rearrange their product/service mix, as well as positioning (Solomon et al, 2006 c. f. Cudmore & Patton, 2008). Mobile marketing provides establishing interactive relationship that connects consumers and firms. Besides all,

mobile marketing allows firms expand and grow, enhances operating efficiency, and offers new marketing segmentations. In addition to these, it improves brand awareness while offers consumers expanded services. Thus, it is focused on the customers and customer satisfaction (Cudmore & Patton, 2008).

It is important to bear in mind that there are some factors which affect users' acceptance of mobile phone as a content to promotional communicating of brands. Designing the marketing message creatively and increasing entertainment enable consumers' approach toward mobile marketing to be more positively. Besides, messages should be highly personal and mass messages should strictly be avoided because they are lack of personality or entertainment (Bauer et al, 2005).

The main purposes of this study can be summarized as follows:

- Evaluate consumers' intention of using different types of mobile marketing applications
- Find out how consumers evaluate mobile marketing applications and determine critical criteria on evaluation of mobile marketing applications
- Investigate general tendency of consumers toward advertising in general, and find out the relationship between their offline advertising attitudes and attitudes toward mobile marketing applications
- Search how importance level attributed to various characteristics of mobile marketing applications determine consumers' attitude toward mobile marketing
- Find out if there are different consumer groups and how these consumer groups differ from each other with respect to their preferences toward various mobile marketing applications

- Investigate if 3G usage has an influence on attitude toward mobile marketing applications
- Investigate if mobile Internet usage has an effect on attitude toward mobile marketing applications

CHAPTER 2

LITERATURE SURVEY

Types of Mobile Marketing

Although mobile still has a little share in overall marketing activities, it is becoming bigger and bigger. When companies or brands decide to use mobile channels in their marketing activities, it becomes critical to bear in mind that there are many alternative mobile channels to reach customers. For example, some downloadable applications may be used together with mobile Internet sites or some other interactive campaigns in order to integrate mobile into the overall marketing campaign or marketing strategy, speaking more generally. In addition, mobile is a very effective channels as it enables to communicate with consumers instantly in an interactive way (Mobile Marketing Association, 2008b).

Different mobile marketing tools can be summarized as; SMS (Short Message Service), sales promotions and discounts, mobile Internet, LBS (Location Based Services), mobile applications, advergame, IVR (Interactive Voice Response), mobile viral marketing, mobile AR (Augmenter Reality), Tone & Win, permission marketing.

SMS

Today, mobile phones are used for different services as well as making and receiving calls. In addition to voice, SMS (Short Message Service) is strongly accepted and used (Mobile Marketing Association, 2008b). As the usage and penetration of mobile phones grow, usage of SMS increase as well. Attractiveness of mobile devices among marketers increases, as they provide direct communication for users who are more and more busy

and difficult to reach. Although there are many different channels and applications promising in mobile marketing, one of the most popular channels is still SMS (Leek & Christodoulides, 2009).

No matter how developed or undeveloped the mobile phone is, almost all of them are supporting SMS (Mobile Marketing Association, 2008a). There are some advantages that enable message services to be used as mobile marketing source. First one of them is the ubiquitous of SMS access and the high usage of SMS, as it is the most frequently used services of mobile phone apart from voice (Mobile Marketing Association, 2008b). Although the main application in mobile phones is still voice, it is proved that SMS is a huge success. According to a survey conducted in United Kingdom, 68% of mobile phone users, use SMS, and service is more popular among young people (Harvey, 2001 c. f. Barwise & Strong, 2002). Also 97% of 14-15 year old mobile phone users and 93% of 18-24 year old mobile phone users use SMS. Ratio of SMS usage decreases to 23% among people in the age of 65 and over. Not only the percentage of usage, but also the volume of the usage of this service is very big. For example, 31% of 18-24 year old people send at least 5 messages per day. Mobile phone users use SMS mostly to make arrangements, then to send quick notes like “call me”, and after that for chatting. The service at least used for work related purposes and instant messaging (Barwise & Strong, 2002).

SMS is strongly used as a mobile marketing tool, not only because of the strong usage, but also because of the technical properties. For instance, SMS does not only support messages sent from one user to another, but also supports messages sent from a

machine like PC or server to mobile phone users (Mobile Marketing Association, 2008a).

SMS is one of the most frequently used channels of mobile marketing today. However, as usage of smartphones like iPhone, Android, Blackberry, and Palm, increase and people start to access Internet via through their mobile phones, mobile search is predicted to dominate mobile marketing. While in 63% of mobile marketing applications SMS is used in 2008, ratio of search is 24%. However, ratio of mobile search is predicted to increase to 73% in 2013, and SMS to decrease to 9% (Schonfeld, 2009).

Location Based Services

Another kind of mobile marketing is a very innovative and creative one, LBS which stands for Location Based Strategy of marketing. Although it needs to be developed with latest innovative applications, LBS is one of the most important mobile marketing types.

Mobile web became a reality as a result of evolution in mobile communications and information technology. It became to be the response to the need for access to information, services and even products anytime and anywhere. Customers have access to most of the wireless applications via their mobile phones or PDAs that can connect wireless. In spite of all these developments, everybody seems to be waiting for "killer" applications in the wireless world, that location based services (LBS) are able to meet the demand (Ververidis & Polyzos, 2002).

LBS are services that are enhanced with and depend on information of the position of a mobile station. The information need to be connected to some other services, otherwise it has no meaning. Main role of LBS is to supply these services to

the user with customized information related to user's position (Ververidis & Polyzos, 2002).

Technologies like the Global Positioning System (GPS) or Cell of Origin (CoO) which enable operators to localize the user, make mobile marketing develop by adapting the marketing impulse to customer's current position (Barnes, 2003 c. f. Bauer et al, 2005). As positioning technologies develop, many experts are encouraged to dream about and work on to develop advanced mobile commerce applications. One of the most effective and competent mobile marketing applications is predicted to be LBS, and as mentioned above it is defined as the "killer application" of mobile commerce (Kölmel, 2003 c. f. Bauer et al, 2005).

The primary purpose of LBS through mobile phones is to move away the obstacles between consumers and brands, no matter if they are geographical or information based. In LBS, customers are reached when they are exactly to the locations of advertisers. LBS are not a new type of strategy, when considered the billboards which are located outside just close to the product. *"STOP! Exit here for McDonald's"* is a typical example. However, in mobile LBS sending the marketing message is in the control of advertisers / brands. Besides, message is able to be personalized, which provides a big power of control (Banerjee & Dholakia, 2008).

On the one hand, personalized LBS messages have more influence on customers, but on the other hand consumers are not in favor of giving personalized information to marketers. However, benefits like price discounts affect customers to share their personal information to be used for marketing campaigns (Banerjee & Dholakia, 2008).

That is why, abusing users' privacy is one of the most important issues that marketers need to be careful about during LBS applications. Especially, during the push based LBS, it is possible that users feel they are always chased, and being spammed with advertisements (Barwise & Strong, 2002 c. f. Oh & Xu, 2003).

Most of the LBS applications struggle with some coverage problems. The coverage area is determined with the sensitivity similar to location of user is determined, by the same network technology which is used for navigation or a wireless connectivity. Sometimes, congestion may occur in the wireless network, and in order to avoid it, every mobile advertisement needs to use only a little area. Beyond this, broadcast should seriously be limited in order to avoid sending many irrelevant advertisements and select promotional messages with great attention (Kurkovsky & Harihar, 2005).

There are two LBS models for delivering information as derived from applications and researches done. First one is push based LBS, which means advertising message is sent to the user automatically. The second one is pull based LBS, in which consumer demands receiving advertising or promotional requests (Ratsimor et al., 2003 and Vershney, 2003 c. f. Kurkovsky & Harihar, 2005). Parallel with overall mobile marketing, mostly used LBS medium is SMS which is used in push strategy. It is a rule that users need to subscribe before sending them advertisements, in order to determine the kind of information or promotion the user is interested (Kurkovsky & Harihar, 2005).

Types of LBS are categorized as follows: Emergency services, emergency alert services, home-zone billing, fleet management, asset management, person tracking, pet tracking, traffic congestion reporting, routing to nearest commercial enterprise, roadside

assistance, navigation, city sightseeing, localized advertising, mobile yellow pages, network planning, dynamic network control (The GSM Alliance Services Working Group, n. d. c. f. Ververidis & Polyzos, 2002).

According to the survey made by Oh & Xu (2003), 43% of the users are willing to reuse the advertising sent as LBS according to the content type of the advertising. Besides, multimedia and entertainment have a big effect of willingness of receiving the advertisement. It is also important to remind that sending messages to customers needs to be given permission by customers.

Mobile Sales Promotions & Discounts

Although there are many types of mobile marketing both in theory and in practice, there is one type that comes to mind first, which is sales promotions and coupons.

Coupons are monetary promotions that add value to message like discounts, trial version, and free message like SMS or MMS. Mostly used type is direct SMS that customers show during purchase (Pousttchi & Wiedemann, 2006).

Ratsimor et al (2003) have developed an intelligent novel marketing model, called eNcentive, that collects sales promotions or discounts, then distributes them to other people in the network in order to benefit when they utilize from these coupons and promotions. The model is not so complicated; eNcentive established PDA collects coupon or discount signals as the user passes by restaurants, cafes, dry cleaners etc. User is also able to subscribe for becoming a distributor of these coupons or promotions. If subscribed, the user distributes the signals. After that, another user who passes by the first user is able to catch these coupons as soon as he passes by the first user. It is possible that coupons are distributed to several users from one another. In order to track

the chain, every coupon, discount or advertisement contains an ID. When a coupon or discount is redeemed, the distributor user of this coupon will be rewarded for example with extra discount. It is worked on developing device which keeps user preferences so that the device will be able to catch the coupons or discount promotions only related to user's preferences.

This eNcentive model is very promising in case it is effectuated, because users are able to catch the coupons that are only their concern. It is very flexible, personalized, private, context and location aware type of mobile marketing. In addition to this, users are able to control the information they collect and distribute (Ratsimor et al, 2003).

There is another novel application about how coupons can be used as a mobile marketing tool. A company called Eagle Eye Solutions, which is specialized in mobile voucher issues, launched a new service called "Buy me a Sing" that enables friends a singing gift to another friend's mobile phone. By this way, one is able to give a night of karaoke as a gift as well as purchase drinks (Mobile Marketing Magazine, 2008).

Mobile Advergame

Another type of mobile marketing services is advergame, which is formed by two words; "advertising" and "games". It can be defined as using digital games as the advertisement of a product, service, brand or organization. High penetration of the Internet enabled advergames grow rapidly (Wikipedia, 2008). In order to embed marketing message to customers, interactive gaming technology is utilized (Zodal, 2010).

Advergames are very useful tools in increasing website traffic as well as brand strengthening. Besides, it is very easy to collect customer data and develop databases by

encouraging users to register in order to win some prizes with the advergames. As the mobile handsets become more and more sophisticated and easy to connect to the Internet, consumers are more familiar and prefer to play games on the go. Thus, brands and companies started to prefer mobile channel for advergames (Wikipedia, 2008). According to Front Networks (2010), if consumers enjoy the games and are excited about the games, they miss and do not overlook the advertisement message, but notice and recognize the information advertised.

Advergames are very advantageous in the means of cost, as it costs fewer than channels like radio or TV. Besides, advergames not only reach a specific audience, but also increase brand awareness, while they are not intrusive, which is a crucial issue of mobile marketing. It is a very effective alternative for companies who choose not to send push marketing messages. Brand directly takes place in the game environment and consumer is attracted to interact with brand or company, as well as the game (Zadol, 2010).

Jupiter Media Metrix Research indicates that, percentage of recipients who will play the advergame they receive around 25 minutes, is 50%. Companies from different sectors, like food and beverage or automobile prefer to advertise through advergames. On the one hand, advergame market is growing, but on the other hand, it is still a small market if compared to other advertisement channels. As gaming industry grows overall, advergame market will also expand (Entertainment Software Association, 2010).

According to Winkler & Buckner (2006), consumers are quite open to the message embedded in the advergame, and more open to product or company. Besides, participants of advergames remember much more details about the message like various

locations where logo was positioned. In addition to all, it is found that advergames are more efficient in strengthening brand than launching brand. Thus, it is advised to use advergames to change or improve brand impression, but not to build brand awareness. There is a very interesting study about the perception of advertising in games, which shows that if consumers' approach toward advertising is negative, it is also negative toward advertising in games. However, consumers who are positive about advertising in general, are not that much positive about advertising which takes place in games (Winkler & Buckner, 2006).

Mobile Internet

In addition to voice and SMS, there are some other services of mobile handsets (mobile phones and smartphones) like content downloads, picture messaging, and mobile Internet (mobile Web), and mobile Internet is one of the most promising services in mobile world (Mobile Marketing Association, 2008b).

Mobile Search

As capabilities of mobile devices increase, Internet access abilities improve and screen space becomes larger, people start to search via mobile Internet. While there seem to be some limitations like size of the screen in mobile search, it is more advantageous in overall compared to desktop Internet search. For example, mobile search results are sensitive to location of the user. Thus, many big players of Internet like Google, Yahoo and MySpace, have already started to develop mobile applications and services (Church & Smyth, 2008).

Mobile Internet Banners

Although it is SMS that dominates mobile marketing services, it is predicted that in the near future, Internet based advertising will be the dominant tool (Salo et al, 2008). Banner and text advertisements on mobile Internet sites are very affective in the means of directing consumers to the company, brand or a specific campaign. There are many different formats of mobile Internet banners. These can be classified as follows (Mobile Marketing Association, 2008b):

- Click-to-Call (Tap-to-Call): Users are able to make an outgoing call to advertiser or content provider by touching or tapping the mobile phone number which is placed on the advertisement.
- Click-to-Locate (Tap-to-Map): Users are able to find the closest shop, restaurant, dealer, movie theatre etc. of the advertiser on the map according to their current location, by touching or tapping the advertisement banner. This is an example of usage of LBS.
- Click-to-App (Tap-to-App): Users are directed to application store where they can download the application of the advertiser.
- Click-to-Video (Tap-to-Video): When users touch the mobile Internet banner, they are directed to a landing page where they can watch the commercial of the advertiser, product or service.
- Click-to-Download (Tap-to-Download): Users are able to download some content like applications, wallpapers, ringtones, videos or logo related to the advertiser in case they touch on the advertisement banner onto their mobile phone when they tap on the advertisement.

- Click-to-Buy (Tap-to-Buy): Mobile users who tap the mobile Internet advertisement are directed to a mobile site or application where they are able to make mobile commerce transactions and purchase the product or service by paying via a credit card. They are also able to pay by adding the billing amount to their monthly mobile bill or some other types of mobile payment.

- Click-to-Brochure (Tap-to-Brochure): Customers are able to subscribe to demand an online or offline brochure by registering their e-mail addresses or postal addresses.

- Click-to-Enter Competition (Tap-to-Enter Competition): Users touch to advertisement in order to enter text or register a competition.

- Click-to-Receive e-mail (Tap-to-Receive e-mail): Users are able to subscribe their e-mail addresses in order to receive e-mails and link to Internet site of the advertiser, by tapping the advertisement.

- Click-to-Mobile Coupon (Tap-to-Mobile Coupon): When users tap on the advertisement, they receive a mobile coupon on their cell phone, which they are able to redeem it as soon as they participate a merchant.

- Click-to-Vote (Tap-to-Vote): When users click on the advertisement banner from their cell phone, they are asked to vote by polling or replying a ballot by their cell phones, so that they provide precious search perception to marketers and brands.

- Click-to-Mobile Site (Tap-to-Mobile Site): Users are directed to the mobile Internet site of the company or mobile site specially designed for a campaign, when they tap on the mobile advertisement banner.

Interactive Voice Response (IVR)

IVR (Interactive Voice Response) is a technology which is developed for hands free applications in automobile sector, but highly used in telecommunication. In IVR, a computer is able to sense voice and DTMF (dual tone multi frequency signaling) inputs of keyboard. Speech recognition or telephone keypad is used to enable customers access database of a company and follow instructions to serve themselves. In order to orient customers, both pre recording and audio that is generated dynamically is used. It may be possible to break down the interface into a simple choices of menu. It is used especially in customer support divisions of companies and it enables to easily manage calls that are big in volume (Wikipedia, 2009b).

While IVR is heavily used in telephone banking, televoting or transactions about credit card, companies started to use it as a tool for their marketing strategy. Companies are able to send IVR messages for their targeted customers. By IVR, it is possible to share information with customers automatically, make customers click a button ans answer a question, and orient customers according to their response and answers. It is also possible to direct customers to the call center of the company with clicking a button at the end of the voice message. One of the biggest advantages of IVR is that, it enables companies communicate with their customers interactively (Turkcell, 2010a).

Mobile Augmented Reality

Computers are decreasing in size and increasing in power, and people are demanding to access online content everywhere and every time. As a result, new applications like augmented reality are becoming to be used in mobile platform (Höllerer & Feiner, 2004). Augmented reality (AR) is a technology where live physical world's components

are augmented. AR can be defined as being the combination of real and virtual, and being interactive in real time. Besides, it is important to note that AR is registered in 3D.

AR has already been popular in marketing and advertising. Marketers promote products or conduct campaigns via AR applications which are highly interactive. For instance, AR uses some projectors or screens and some advertisement objects are inserted to the real physical environment (Wikipedia, 2009a).

Ringback Tone Advertising Platform

Tone & Win is the world's first advertising platform for ringback tone. Mobile phone subscribers are able to make their callers listen not the regular but a branded ringback tone, which they select among different branded music content (Butcher, 2009). In other words, consumers are able to select a content of brands and replace it with their regular ringtone, so that people who call them hear the advertising music or jingles of brands. Besides, subscribers of this service earn credit or airtime. The total amount they can earn depends on how much time users' callers listened ringback tone advertisement music (Murphy, 2009).

The objectives of Tone & Win can be summarized in four main topics. 1) It is possible to create an unusual advertising platform on mobile channel. 2) It offers a loyalty program for its users. 3) As Tone & Win users increase continuously, revenue of both subscribers' and brands' increase, that is earned from mobile marketing activities. 4) Finally, Tone & Win becomes a precious tool in the means of competing in the GSM market, both in gaining competitors' customer and decreasing churn (Butcher, 2009).

In addition to all, as Tone & Win is independent of handset capabilities and technology, it is very advantageous in reaching big volume of users. Besides, pricing

model is performance based which is called CPL (Click per Listening), which is totally measurable. Thus, brands are charged according to the amount of their advertisement that is listened (Butcher, 2009).

Mobile Viral Marketing

Mobile word of mouth (m-WoM) is another kind of mobile marketing that takes attention of marketers. It can be defines as the modern version of Word of Mouth.

Word of Mouth (WoM) means the peer to peer oral communication from communicator to receiver (Wiedemann, 2007). In WoM, the receiver gets a message about the brand, product or service, but the message is not a commercial one. Mobile viral marketing (m-viral marketing) is derived from traditional WoM and electronic viral marketing (Wiedemann, 2007 c. f. Wiedemann et al, 2008). It is defined as being the world's most effective marketing strategy (Misner, 1999 c. f. Wiedemann et al, 2008).

People who transfer mobile viral message are called "communicators" and people who receive this message are called "receivers" (Pousttchi & Wiedemann, 2007 c. f. Wiedemann et al, 2008).

Mobile viral marketing is also defined as a concept which relies on users of mobile phones to transmit content via various mobile communication tools to other mobile users in their social environment (Wiedemann et al, 2008).

Parallel to this definition, m-WoM means sending advertising message to customer through another customer using mobile communication (m-communication) techniques. Professionals prefer m-WoM, because it is proved that message coming from an acquaintance results in more participation than message coming from a commercial source (Pousttchi & Wiedemann, 2006). Besides, viral effect of messaging

via mobile phones is very strong as recipients forward messages to highly relevant users (Mobile Marketing Association, 2008b).

Mobile phone ownership is rapidly growing as told before. This increases the opportunities of development of not only mobile marketing, but also the development of m-WoM (Wiedemann, 2007). Also, 70% of experts declare that m-WoM has importance among mobile marketing applications, because the personal message has more credibility that an advertising message. Thus, the users are more willing to attend the mobile marketing campaign if the message is coming from a familiar party (Wiedemann & Marini, 2006 c. f. Wiedemann, 2007). It is very important to decide which type of m-viral marketing is going to be used, in order to reach success in the marketing strategy. Targeting the right individuals with right message is the most crucial point (Wiedemann et al, 2008).

In addition, advertising reach is able to be expanded without increasing the cost, as the 30% of 2,500 people would download a mobile application in case a friend of them recommended (Skopos 2005, c. f. Wiedemann, 2007). However, the success of the strategy depends on the perception that the communication kept up with peers, and it is also very important that the expert of a topic is not perceived as a hired employee of a brand/company (Wiedemann, 2007). Beyond this, Okazaki, 2005 asserts that m-WoM is able to replace peer to peer WoM or PC or Internet based WoM.

If marketers intend to take advantage of the consumers who have influence on others, they need to utilize from m-WoM, because M-WoM directs purchase decisions and customers' choice (Arndt, 1967 and Bansal & Voyer, 2000 c. f. Wiedemann et al, 2008). However, more importantly, m-WoM generates expectations of customers

(Zeithaml & Bitner, 1996 c. f. Wiedemann et al, 2008), perceptions before usage (Herr et al, 1991 c. f. Wiedemann et al, 2008) and even attitudes after using the product or service (Bone, 1995 c. f. Wiedemann et al, 2008).

Mobile social networking, which may be a simple chat room or a multimedia rich environment, provide different methods for marketing, like purchasing advertisements in order to appear in the mobile handset to be paid in case of clicked through, or create / sponsor a portal for mobile community. Purchasing advertisements that are inserted into a game or video clip is also another method. As it had been predicted that 100 million people would be using mobile social networking services all around the world by December'08, mobile marketing industry objects to establish a framework with mobile social networking (Perey, 2008).

Besides all, there is another strategy about mobile social networking which does not mention directly purchasing advertisements, but involves establishing systems in order to provide loyal advocates who are real customers and/or consumers that promote the brands they admire. In this system, community participation soul is created as members of this community recommend each other products and/or brands. Thus, members perceive the product and/or brand more positively, as the message source does not have commercial concerns (Perey, 2008).

Mobile Applications

With the development of mobile device industry, more and more sophisticated applications are demanded. With improvements in mobile applications, usability of mobile devices is extended and phones supported not only voice and SMS services, but also many sophisticated applications. There are three factors used to describe the growth

of mobile applications. They are; mobile network infrastructures' maturity, advanced mobile hardware, and increase in demand of mobile services and applications (Gasimov et al, 2010).

There are six big application stores in mobile sector, which are Apple's iTunes App Store, BlackBerry App World, Google Android Market, Nokia Ovi Store, Palm App Catalog and Windows Marketplace for mobile (Gasimov et al, 2010). The latest discussion about application stores is about prices of applications. While 57% of applications on Google's Android are free, and Palm, Apple, Blackberry and Windows follow Google. Nokia is the one that prefers to offer applications paid, with the paid application percentage of 85%. Besides, Apple's App Store is far above the average with its 150,998 applications, in the means of store size, while Android follows it with 19,297 applications (Perez, 2010).

Mobile Permission Marketing

Permission marketing is a term defined by Seth Godin and it is used in marketing in general and in e-marketing (Internet marketing) specifically. It is very important that marketers get permission before they use push strategy not only in marketing in general or e-marketing specifically, but also in mobile marketing activities.

While using many different mobile applications as a marketing tool, it is advised companies to contact customers and mobile users after taking their permission. Customers are asked to subscribe their cell phone numbers to services parallel to their interest. After subscription, the information is used in targeting users, so that they are sent advertisements and different messages about seasonal discounts, new product releases or other promotional messages related to their concerns. Thus, the customers are

really advantageous with the messages or coupons they receive, and they redeem by going to the stores (Oh & Xu, 2003). Explicit permission is very crucial, in the means of acceptance of the mobile marketing applications and satisfaction of users. Thus it is very important that mobile phone users are already given their explicit permission to receive marketing messages. It is very undesirable that mobile advertising messages are perceives as spam, because users might probably be irritated and will delete the message without reading it (Barwise & Strong, 2002). Right at this point, "permission" plays an important role. Permission based application provide users' trust toward mobile marketing as well as the companies or brands sent the message (Oh & Xu, 2003).

CHAPTER 3

THEORETICAL MODEL AND HYPOTHESES

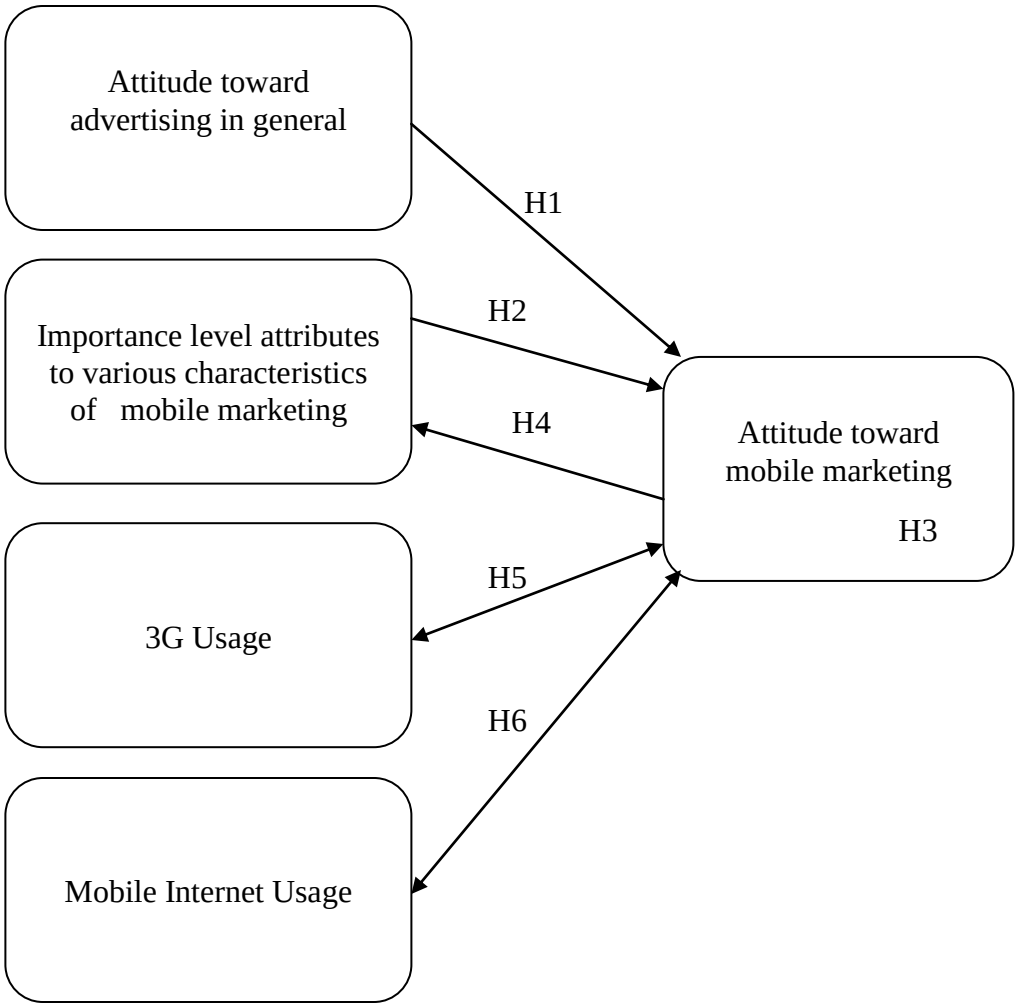


Figure 1 - Theoretical Model

Module 1: Consumer Characteristics

This module includes various characteristics which might play a role on the preferences of mobile users directly or indirectly. These characteristics are demographic or technographic consumer characteristics and characteristics of general attitudes toward advertising. While demographic and technographic consumer characteristics are deterministic consumer characteristics and can be easily measured, attitude characteristics are more complex and difficult to measure, so it is needed to use scales.

Demographic and Technographic Characteristics of Mobile Phone Users

Demographic characteristics of consumers may play a crucial role directly or indirectly on users' perception and attitudes related to mobile technology, marketing and advertising, and their well being. Income level and mobile phone user habits are also included in the module, as well as the demographic characteristics.

1. Age: One of the most important and common demographic characteristics have been used in research, as it is wanted to reach young people who are expected to be more interested in mobile applications.
2. Gender: This characteristic is used to confirm if female and male distribution of respondents is normal
3. Marital Status: This characteristic is predicted to be playing a role in preferences of mobile users.
4. Education: This characteristic enables to confirm that participants are educated people
5. Income: This characteristics is asked in order to satisfy the potential of being an experienced mobile marketing user.

6. Mobile Phone Usage: The aim of asking for how many years participants use mobile phones is to see how experienced the respondents are, as the experience is an important factor in mobile phone usage.
7. Phone Brand: This is asked to see if there are enough participants of different mobile phone brands. As smartphone users might show different characteristics and might have different motivation factors than cell phone users, it becomes important to choose a target group who are familiar with mobile marketing applications.
8. GSM Operator: GSM operator that participants are subscribers of is another important characteristic, as it is needed to give place to subscribers of all operators.
9. 3G Subscription: 3G subscription is a fundamental technographic characteristic to learn the familiarity and knowledge of the customer about data usage via mobile handsets in terms of being potential user of mobile marketing applications.
10. Mobile Internet Usage: Mobile Internet usage is another fundamental technographic characteristic as well, as it is important to learn the familiarity and knowledge of the customer about mobile Internet usage in terms of being potential user of mobile marketing applications.

Characteristics of General Attitudes Toward Advertising

In the second part of the module 1, it is aimed to determine the attitude characteristics of users toward advertising activities of companies in general. In literature, there are large content of advertising characteristics that might be used to measure attitude

characteristics of consumers. As a result of literature survey, it is decided to use variables which were used by Kımıloğlu & Emre (2009) in the study of Attitudes Toward Web-Based Advertising and Specific Internet Ad Formats, to determine characteristics of attitude toward advertising in general, as these variables were found to be reliable in the Turkish consumers market in the previous study. In this scale, consumer attitudes toward the following attitudes of advertising have been measured:

1) Informativeness: This characteristic is used to measure if consumers think advertising activities of companies inform consumers about new products and services of companies.
2) Exaggeration of Product Related Information: This characteristic of advertising is used to measure whether the information about products and services that companies give to consumers is exaggerated or not.
3) Guidance in Purchasing: This characteristic is used to measure if consumers think advertising activities help them give purchase decisions.
4) Triggering Purchases: This characteristic is used to find out if consumers think that they are triggered by advertising activities to make purchases which they do not need actually.
5) Benchmarking: This characteristic of advertising is used to measure if consumers think advertising activities are indicative of what is consumed by other consumers with similar living standards.

6) Providing Economic Advantage: This is used to evaluate if consumers have a positive attitude by thinking advertising activities help prices to decrease by intensifying competition.
7) Increasing Quality: This is used to evaluate if consumers think advertising activities help increase quality of products and services by increasing competition.
8) Wastefulness of Company Resources: This is used to evaluate if consumers have a negative attitude by thinking that companies might have used their resources for more beneficial purposes, instead of wasting resources by advertising activities.
9) Unrealistic Representations: This characteristic of advertising is used to measure if consumers think advertising activities present an imagery world to consumers.
10) Wasting Consumers' Time: This characteristic of advertising is used to measure if consumers think advertising activities cause consumers waste their time.

Module 2: Attitude Toward Mobile Marketing Activities

One significant factor in today's increasingly mobile world is general attitude toward mobile marketing activities. Attitude of customers toward mobile marketing affect their purchasing behaviour in addition to other simple commercial interactions. Thus, in this module of the study, several types of mobile marketing services are displayed, in order to evaluate mobile users' attitudes toward them.

A large content of mobile marketing applications used in real life are studied in detail in the literature survey. It is tries to give place to very wide range of mobile

applications, not only currently used up to date applications, but also the contemporary future potential services.

Mobile applications that are given place to in this study can be listed as follows:

1) SMS: SMS has always been in the center of mobile marketing, since the very early ages of mobile phones and applications. Although various contemporary services evolve, SMS is still one of the most used applications. Thus, it is very crucial to give place to SMS in evaluation of attitude toward mobile marketing applications.
2) Location Based Services (LBS): As mobile handsets become more and more complicated, and technologies like GPS are embedded into new devices, services become more customized according to user's location. Thus, LBS have become one of the most popular contemporary mobile marketing applications in Turkey.
3) Mobile Sales Promotions and Discounts: It is important to evaluate attitude of users toward mobile sales promotions and discounts, as these applications are very traditional marketing tools, but put an appearance in customers' mobile phones.
4) Advergames: Another application that takes place in the study is advergame, which spreads with digital evolution and increases popularity with developments in mobile area.
5) Mobile Internet: As the mobile phones become more and more sophisticated, it became possible to connect to the Internet through mobile handsets. Thus, online search found a place in mobile area as mobile search and online advertising

banners found place in users' mobile handsets as mobile Internet banners, while users connect to the Internet through their mobile phones.

a) Mobile Search

b) Mobile Internet Banners

6) Interactive Voice Response (IVR): As IVR is a very modern application and finds new areas of usage among both GSM operators and other sector companies as a marketing tool, it is needed to give place to IVR in this study.

7) Mobile Augmented Reality (AR): Augmented reality is a technology that has a wide area of usage like architecture, sight seeing, education, entertainment, military, etc. However, this technology started to be used in marketing are in online and in mobile channel.

8) Ringback Tone Advertising Platform: This service is a very creative and intelligent new application of mobile marketing, so it is important to evaluate users' attitude toward ringback tone advertising.

9) Mobile Viral Marketing: Viral marketing, which is used to achieve marketing objectives is started to be used in mobile platform. As this is a very promising application, it is important to evaluate attitude of users toward mobile viral marketing applications.

10) Mobile Applications: As mobile phones and handsets become more developed, and smartphone users increase continuously, mobile applications (like iPhone applications) became an advertising medium. Companies used mobile application to publish their advertising banners, or they developed their own mobile applications.

11) Permission Marketing: Since the online marketing and e-mail marketing became popular, new concepts like permission marketing evolved. Not only in online marketing, but also in mobile marketing it is very crucial to get customers' permission before sending advertising messages to them. In addition, customers' attitude toward permission marketing needs to be evaluated.

Module 3: Importance Level Attributed to Various Characteristics of Mobile Marketing Applications

Importance level of characteristics of mobile marketing applications is another significant factor in acceptance and usage of mobile marketing applications today. Thus, it is aimed to determine on what extend users find the characteristics of mobile marketing activities important. In order to determine characteristics that will take place in the study, literature have been studied deeply, and the advertising characteristics listed below are decided to take place in research:

1) Entertaining: As technology makes advertising and mobile marketing services more interesting, these applications become more and more entertaining. Since entertainment is one of the core factors in users' preferences, it is one of the most powerful tools for mobile marketing and advertising. Thus service developers try to develop applications and advertising with entertainment concerns.
2) Innovativeness: This characteristic is given place in this study because mobile technology brings innovation in life in general. New technology makes people be able to maintain their knowledge up to date about most recent developments which they are able to benefit from immediately. For instance, it is investigated

how important users find to connect Facebook or Twitter via their mobile handsets.

3) Ease of use: The improvements in many areas in mobile technology helps users in consuming less time an effort. As technology brings efficiency by being user friendly and being easily understandable, it is important that technology does not make it impossible for users to overcome barriers or fulfill various requirements of new applications. Because, technology that facilitates handling difficult situations more easily, may also cause users to develop dissatisfaction when they are not able to use the applications properly.
4) Informativeness: Ubiquity property of mobile marketing services and applications makes information easily reached by users. Thus, customers are able to reach any kind of information about products or services, as well as companies, anytime or anywhere they are.
5) Facilitating: Mobile technology makes people encounter new applications of marketing that facilitate handling difficult situations more easily. Thus, people feel smart enough and confident enough to cope with most of the problems they face. It is tried to find out how important it is for customers that applications ease their life or help them explore new products or services. Besides, it is needed to find out if it is important or not for users that services enable them complete a task they are not able to complete in another way. Thus, mobile technology makes life more comfortable.
6) Monetary Advantage: Economic benefit has usually been a positive factor in marketing activities. Likewise, users have probably more positive attitude toward

mobile marketing applications which enable them to make more economically advantageous choices or to give more conscious decisions. Besides, it is important to investigate if users prefer applications which are free of charge or which have low price.

7) Customization: In developments in mobile marketing services and applications, customization in terms of time and cost become more and more crucial. As well as property variety, price differentiates even for similar products. Besides, as the services are developed for consumers privately, users may have more positive attitude toward these applications. By collecting and analyzing users' behaviours, more personalized services will be able to be developed.
8) Privacy and Security: While technology is considered as the main factor for today's world, the main cause is to keep things in private. Misuse of technology or undesirable privacy violation may cause users to have irreversible adverse attitudes. In order to be able to keep up with all of the trends which are surrounding users, privacy concerns have become critical. Besides, credit card payments have always been open to fraud. Thus, role of advanced security systems that help to minimize this risk becomes more and more crucial.
9) Voluntary Participation: Mobile marketing applications, especially services like banner advertising or sales promotions via SMS, are improved to a higher level from online marketing to mobile marketing. However, consumers encounter advertising too often and probably against their wills since mobile marketing tool may pop up from many channels.

10) Network Effect: Sometimes, users might give importance to how many people service or application is used by. It is investigated if users of mobile applications give importance to volume of usage, and on what extend they find it important.

Hypotheses

Objectives of this exploratory study can be briefly explained as follows:

- Find the relationship between attitude toward advertising and attitude toward mobile marketing
- Find the relationship between characteristics of mobile marketing applications and attitude toward mobile marketing
- Investigate if mobile phone users can be classified according to their attitudes of mobile marketing applications
- Search if the consumer groups differentiate from each other according to importance level of various characteristics of mobile applications
- Find out if there is a difference between 3G users and nonusers attitude toward mobile marketing
- Search if there is a difference between 3G users and nonusers attitude toward mobile marketing

Hypothesis 1: There is a positive correlation between consumers' attitudes toward advertising in general and attitudes toward mobile marketing.

Hypothesis 2: Importance levels attributed to various characteristics of mobile applications determine consumers' attitudes toward mobile applications.

Hypothesis 3: Consumers can be grouped according to the tendencies they show toward various mobile applications.

Hypothesis 4: Different groups of consumers with different attitudes toward mobile marketing applications also differ in terms of the importance levels they attach to various attributes of mobile applications.

Hypothesis 5: There is a significant difference in attitudes toward mobile marketing between 3G users and 3G nonusers.

Hypothesis 6: There is a significant difference in attitudes toward mobile marketing between mobile Internet users and mobile Internet nonusers.

CHAPTER 4

RESEARCH METHODOLOGY

In the literature survey part of the study, mobile marketing concept is examined in details and types of mobile marketing are summarized. This chapter of the study identifies technical details of the questionnaire which is specially designed for this study.

With the guidance of these information, the objective of this study is determined as: (1) find out the relationship between attitudes toward advertising in general and mobile marketing applications, (2) learn how importance level of characteristics of mobile marketing affect users' attitudes toward mobile marketing applications, (3) determine if different groups of consumers who have different attitudes toward mobile services, and if they give different importance to characteristics of mobile marketing applications, (4) find out the relation between 3G usage and attitude toward mobile marketing, and (5) find out the relationship between mobile Internet usage and attitude toward mobile marketing.

This survey also aims to find out latest trends in mobile marketing implementations in Turkish market.

Preparation of the questionnaire, choice of people for the questionnaire, components of the questionnaire, data analyses approach will be stated in this chapter.

Preparation of the Questionnaire

The questionnaire was developed after the literature survey part. A pilot survey was conducted with 14 people to see whether the questions are understood clearly or not.

These 14 respondents did not encounter any problems about understanding the questions and applications, and the feedback from respondents was satisfactory.

In order to evaluate the attitude toward contemporary mobile marketing applications, some questions were asked about future applications like augmented reality technology or IVR (Interactive Voice Response). As these applications are very new to Turkey, it was very difficult to explain the meaning of these new services. Thus, it is decided to show some videos in order to make participants understand applications clearly. The applications and services which videos were shown about are: (1) IVR (2) Augmented Reality (3) Advergame.

The video about IVR services showed a campaign of Lipton. When consumers opened the packaging of Lipton tea bags, they encountered "Her Şeyi Bilen Kadın" (the Woman Who Knows Everything). This woman called the consumers who sent SMS to the short code 7513, and she claimed that she could find their location. In order to make surprise to customers attending the campaign, this woman called them three times a day. Thus, it was possible to create customers' interest to the campaign.

Another video, which is about augmented reality application of Ikea. Video presents the use of a webcam, and printed markers enable consumers to try the furniture for fit and size before buying them. Every piece of furniture has its own individual marker. Consumers simply print or grab a marker, then they place it and view it to see how furnitures look. Then, it is possible to buy the whole room, as well as a specific piece directly from webshop of Ikea.

Another video about augmented reality, is shows application of Mini Cooper. When consumers show the two dimensional barcode to webcam, virtual image of the car

is seen on the screen. These two dimensional barcodes are placed in automobile magazines. Thus, customers interact with brand and the product.

Other videos that are shown are about advergames. First video about advergame applications is Pepsi's avergame. In the game, there are floating letters which form PEPSI, and players try to hit letters.

Second video about advergames is the game of Burger King's Sneak King. In the game, there is a virtual city and the user takes the role of the King, and King's task is to deliver food (usually hamburgers) to hungry people. People roam around the map in set patterns and have a small Metal Gear Solid style vision cone. If they have a burger icon above their head, then they're hungry and it is time for him to get food to them before they faint.

The opinion of the participants was received about the questionnaire. The number of questions was found moderate, as well as the length of the questions. Besides, videos that were shown were found clear and understandable enough.

Choice of People for the Questionnaire

Convenience sampling was used in this study. The data for this study has been collected from individuals in Turkey, Istanbul, but the sample was targeted. As mobile marketing is a very new area, it would not be meaningful to target people who are not familiar with mobile marketing applications. Besides, questionnaire contained questions about applications which use superior technology in superior handsets. Thus, it would make more sense to target a sample that is composed of not only participants who use mobile phones, but also the participants who use smartphones.

As a result, it is decided to target highly educated young people who has an experience of mobile phones and other mobile handset (like smartphones, PDA, mobile computer etc.). It was not possible to prepare the questionnaire on Internet, because it was important to show the videos. Thus, it is decided to conduct the survey among graduate students, and 23 different classes of graduate programs were visited from 7 different universities in Istanbul, and survey was conducted among 350 people.

Components of the Questionnaire

Survey questionnaire is composed of four parts: (1) Demographic characteristics of the consumers, (2) Attitude toward advertising in general, (3) Attitude toward mobile marketing applications and (4) Importance level attributed to various characteristics of mobile marketing services.

Demographic characteristics part includes 10 questions of age, gender, marital status, education, income, mobile phone usage history, mobile phone brand, GSM operator, 3G usage and mobile Internet usage. Age and income was asked in order to satisfy the need to reach potential customers who encounter mobile marketing applications and services. Education level was asked to understand if participants have the ability to use the contemporary high tech services. Gender and marital status have also been asked as they can significantly have influence on user behaviours. The aim of asking mobile phone usage history, mobile phone brand, GSM operator, 3G usage and mobile Internet usage is to find out the familiarity and knowledge of the user about mobile applications and services.

The second section of the questionnaire, which tries to determine general attitude toward advertising, is composed of questions which were derived from the study of

Kimiloglu & Emre (2009). This study suggests that, people feel both positive and negative effects of advertising activities at the same time, and advertising activities does not provide solely advantages or solely disadvantages.

In order to avoid bias, it is needed to know that reverse coding was used for negative statements. Participants were asked to answer the statements on a 5-point likert scale, which are: (1) Strongly Agree, (2) Agree, (3) Neither Agree Nor Disagree, (4) Disagree, (5) Strongly Disagree. Then, 10 statements were asked in this part of the questionnaire to determine the degree to which a consumer has attitude toward them. Interest of these statements is about:

- Giving information about products and services
- Giving exaggerated information about products and services
- Giving purchase decisions
- Triggering about products and services that are not needed
- Showing consumers other similar consumers' life standards
- Enabling price decreases
- Enabling quality increases
- Causing companies waste their resources
- Presenting an imagery world
- Causing consumers waste their time

The third part of the questionnaire is a self constructed scale, which aims to evaluate participants' level of willingness to use different mobile marketing applications and services. Thus, 12 different mobile marketing applications and services were listed in the

light of literature survey, and level of willingness to use these services is tried to be evaluated with 29 items of statements. These 12 mobile marketing services are:

1) SMS (first to fourth items, sixth item, fourteenth item and twenty fourt item)
2) Sales Promotions and Discounts (first to second)
3) Advergame (seventh item and twenty ninth item)
4) Permission marketing (fifth item)
5) Mobile Applications (eighth to eleventh items, thirteenth item)
6) Mobile Viral Marketing (twelfth item)
7) LBS (Location Based Services) (fifteenth to seventeenth items)
8) Mobile Internet (eighteenth to twenty second items) (Mobile Search, banners)
9) IVR (Interactive Voice Response) (twenty fifth to twenty sixth items)
10) Ringback Tone (twenty seventh item)
11) Mobile Augmented Reality (twenty eighth item)
12) Permission Marketing (twenty third)

Participants of the survey were asked to indicate the level of their willingness to use these mobile marketing applications and services, on a 5-point likert scale, which are: (1) Strongly Agree, (2) Agree, (3) Neither Agree Nor Disagree, (4) Disagree, (5) Strongly Disagree.

The fourth and final part of the questionnaire is composed of the importance levels attributed characteristics of mobile marketing. It is developed to measure how much importance users give to different characteristics of mobile marketing applications. Respondents were asked to answer the questions on a 5-point interval scale, which are: (1) Very Important, (2) Partially Important, (3) Neither Important Nor

Unimportant, (4) Not Very Important, (5) Not Important At All. As all the statements that are used in this part are positive, reverse coding was not necessary.

1) Entertaining (first item): This item aims to find out to what extend entertainment is important for users, in order to orient service developers of mobile marketing application or service developers about entertainment concerns.
2) Innovativeness (second to third items, and fourteenth item): This item aims to find out how important it is for users that mobile marketing applications their innovative, as these applications pioneer innovation in users' lives.
3) Ease of use (fourth to fifth items): This item aims to learn if it is important for mobile handset users to be able to use and understand services easily. On the one hand, superior services may bring superior applications to users', but on the other hand, new services may be very difficult to use, which will probably affect acceptance of services.
4) Informativeness (sixth to seventh items): The aim of this item is to learn how important it is to be innovative for mobile marketing services. Mobile users may prefer to be informed by mobile services they use, or may not prefer.
5) Facilitating (twelfth and eighteenth items): The aim of this item is to determine the importance level of facilitation for users, as they may help in completing tasks that are not able to done in other ways.
6) Monetary Advantage (eighth, ninth and eleventh items): This item aims to find out if consumers give importance to gain economic advantage with using mobile marketing applications.

7) Customization (tenth item): With this item, it is aimed to determine if participants find personalization important or not.
8) Privacy and Security (thirteenth item): Importance levels of privacy and security issues are tried to be evaluated with this item, as users may be sensitive about password or personal information related issues.
9) Voluntary Participation (fifteenth and sixteenth items): The aim of this item is to learn how important it is that a user does not encounter a marketing message too often and does not become disturbed, and even does not receive the message if not given permission.
10) Network Effect (seventeenth item): The aim of this item is to learn if it is important or not that a mobile service is used by many people.

Data Analyses Approach

After answered questionnaires were collected, data was entered to SPSS for further statistical analyses. The following analyses were done to the data collected:

- Descriptive analyses were done for demographic and behavioral characteristics of consumers.
- Correlation analysis was done for the relations between attitude of consumers toward advertising in general and attitude toward mobile marketing.
- Multiple regression analysis was done to construct the mathematical formulas for dependent variable, attitude toward mobile marketing, with importance levels attributed characteristics of mobile applications as independent variable.

- Cluster analysis was done for attitude toward mobile marketing to find different types of mobile phone users that can be grouped together.
- Anova analyses is done in order to find out if different groups of consumers with different attitudes toward mobile marketing also differ in terms of importance levels they attach to various attributes of mobile marketing applications.
- T-tests were done for 3G usage and mobile Internet usage, in order to determine if users of 3G and mobile Internet differ from nonusers, in the means of attitude toward mobile marketing applications.

CHAPTER 5

ANALYSES AND FINDINGS

Descriptive Findings

Demographic Profile of the Respondents

Basic Demographic Characteristics

Table 1 – Age

	Frequency	Percent	Valid Percent	Cumulative Percent
18-23	74	21.1	21.1	21.1
24-29	214	61.1	61.1	82.3
30-35	52	14.9	14.9	97.1
36+	10	2.9	2.9	100.0
Total	350	100.0	100.0	

As mobile marketing applications are analyzed in this study, it is very important that targeted profile for this study knows or is able to recognize mobile marketing applications. As 82.3% of participants are below the age of 30, and 97.1% below 35, young and early adult population is dominant in this study. As younger people are more curious about technology, participants of this study most likely have insight about mobile marketing application.

Table 2 – Gender

	Frequency	Percent	Valid Percent	Cumulative Percent
Female	163	46.6	46.6	46.6
Male	187	53.4	53.4	100
Total	350	100.0	100.0	

While males are slightly more than females with a ratio of 53.4%, it is possible to say that distribution is relatively equal with regard to gender. Thus, study represents preferences of both males and females equally.

Table 3 - Marital Status

	Frequency	Percent	Valid Percent	Cumulative Percent
Unmarried	307	87.7	88.0	88.0
Married	42	12.0	12.0	100.0
Total	349	99.7	100.0	
Missing System	1	.3		
Total	350	100.0		

As the target group of this study is educated young and early adult people, it has been predicted that a high percentage of respondents to be unmarried. Parallel to this prediction, ratio of single people is quite high with 88%.

Table 4 – Education

	Frequency	Percent	Valid Percent	Cumulative Percent
University Student	44	12.6	12.6	12.6
University Graduate	13	3.7	3.7	16.3
Master Student	279	79.7	79.7	96.0
Master Graduate	14	4.0	4.0	100.0
Total	350	100.0	100.0	

As the target group is educated young people, every participant is at least university student. Most of the respondents' education level is postgraduate, with the ratio of 83.7% (Master students and master graduates). As the highly educated people are so dominant, study represents the preferences and standpoint of educated segment. This distribution is also very good since most of the mobile marketing service are enhanced mobile phone users, and they are mostly educated people.

Table 5 – Monthly Personal Income

	Frequency	Percent	Valid Percent	Cumulative Percent
Below 1,000 TL	68	19.4	19.4	19.4
1,000-2,000 TL	108	30.9	30.9	50.3
2,000-3,500 TL	96	27.4	27.4	77.7
Above 3,500 TL	78	22.3	22.3	100.0
Total	350	100.0	100.0	

When the income level distribution of the subjects is analyzed, it can be easily seen that, every income group (middle-low, middle-high, high) is presented in the survey. As

mobile phone usage is independent of income level, it is very good that there are enough participants from every income group.

Mobile Phone Usage History

Table 6 - Mobile Phone Usage

	Frequency	Percent	Valid Percent	Cumulative Percent
7-	66	18.9	18.9	18.9
8+	284	81.1	81.1	100.0
Total	350	100.0	100.0	

The distribution of mobile phone usage show us that, target group of this study is highly experienced in the means of mobile usage. The ratio of respondents who use mobile phone less than 8 years is only 18.9%, while 81.1% of participants have a mobile phone for 8 years or more. This is very important since it is better that questions are evaluated by more experienced users.

Table 7 - Mobile Phone Brands

	Frequency	Frequency (New Distribution)	Percent	Valid Percent	Cumulative Percent
Nokia	155	149	42.7	42.7	79.6
iPhone	69	67	19.0	19.0	33.6
Samsung	58	56	16.0	16.0	99.7
Blackberry	42	40	11.6	11.6	11.8
S. Ericsson	14	13	3.9	3.9	83.7
LG	8	8	2.2	2.2	35.8

Table 7 - Mobile Phone Brands (Continued)

	Frequency	Frequency (New Distribution)	Percent	Valid Percent	Cumulative Percent
HTC	7	7	1.9	1.9	14.6
Motorola	4	4	1.1	1.1	36.9
G. Mobile	3	3	0.8	0.8	12.7
Asus	1	1	0.3	0.3	0.3
Palm	1	1	0.3	0.3	79.9
Siemens	1	1	0.3	0.3	100.0
Total	363	350	100.0	100.0	

When brands of mobile phones used by participants of the study are analyzed, it is seen that the dominant leader among mobile phone brands is Nokia. Nearly half of the respondents, 42.7%, use Nokia and it is followed by three brands that form the second highly used group. They are iPhone with 19%, Samsung with 16% and Blackberry with 11.6%. As the new contemporary mobile marketing applications are presented highly through smartphones, it is very important ratio of smartphone usage among participant group is satisfactory. iPhone and Blackberry users form together 20.6% of total phones, and there are also smartphones among other brands. This indicates that, target group is probably highly familiar with contemporary mobile phone applications, and has experience in order to evaluate applications that are asked in the questionnaire.

Table 8 - Avea Subscribers

	Frequency	Percent	Valid Percent	Cumulative Percent
No	265	75.7	75.7	75.7
Yes	85	24.3	24.3	100.0
Total	350	100.0	100.0	

Table 9 - Turkcell Subscribers

	Frequency	Percent	Valid Percent	Cumulative Percent
No	54	15.4	15.4	15.4
Yes	296	84.6	84.6	100.0
Total	350	100.0	100.0	

Table 10 - Vodafone Subscribers

	Frequency	Percent	Valid Percent	Cumulative Percent
No	312	89.1	89.1	89.1
Yes	38	10.9	10.9	100.0
Total	350	100.0	100.0	

As a result of the analysis, it is possible to say that number of Turkcell users is substantially high; 84.6% of all respondents consist of Turkcell subscribers. Turkcell is followed by Avea with 24.3% and Vodafone is the least used operator among all participants with the ratio of 10.9%. On the one hand, this distribution does not represent actual market shares, where Turkcell also dominates the market with the ratio around 56%, and other operators share rest of the market as Vodafone around 25% and Avea around 19% (Turkcell, 2010b). On the other hand, it is advantageous that Turkcell is dominant among participants of this study, because Turkcell is the GSM operator that

uses mobile marketing applications more than other two operators. As it uses current mobile marketing applications heavily and pioneering the development of new applications, Turkcell subscribers are probably more familiar with different types of mobile marketing applications. Thus, this situation is an advantage for the study as respondents are supposed to evaluate the questions deeply. It is also needed to indicate that, there are some subscribers who use double sim cards.

Table 11 - 3G Usage

	Frequency	Percent	Valid Percent	Cumulative Percent
Yes	159	45.4	45.4	45.4
No	191	54.6	54.6	100.0
Total	350	100.0	100.0	

Table 12 - Mobile Internet

	Frequency	Percent	Valid Percent	Cumulative Percent
Yes	232	66.3	66.3	66.3
No	118	33.7	33.7	100.0
Total	350	100.0	100.0	

3G subscription and connection to Internet through mobile phone are other indicators which is crucial in this study, because in most of the mobile marketing applications, especially in potential future applications, users need to have Internet connection. Ratio of participants who indicate that they are 3G users is 45.4%, which means nearly half of the users in this study are subscribed to 3G, which is a very high ratio. Besides 66.3% of target group state that they connect Internet through their mobile phones (Table 11 and

Table 12). Compared to the actual Turkish GSM market, 3G usage and mobile Internet usage ratios are also high, but this is again an advantage in the means of customers' being aware of mobile marketing applications.

Usage Behaviour of Mobile Marketing Applications

Advertising in General

Table 13 - Attitudes Toward Advertising in General

Advertising activities of companies:	N	Mean	Std. Deviation
Enable customers to become informed about products and services	349	4.0487	.75463
Help customers make purchase decisions	349	3.8567	.77837
Give exaggerated information to customers about products and services	349	3.7765	.92935
Enable quality of products and services to increase by intensifying competition	349	3.7564	.95336
Enable prices to decrease by increasing competition	349	3.5172	1.08287
Trigger customers to purchase products or services which they do not need	349	3.4900	.97264
Show customers what is consumed by other people who have similar living standards	349	3.3811	.97720
Present an imagery world to consumers	349	2.8797	1.00993
Present an imagery world to consumers	349	2.5788	.96651
Cause consumers to waste their time	349	2.5616	.98542
Average	349	3.2969	.47861
Valid N	348		

11^{th} question of the questionnaire includes set of questions that were directed to the participants in order to find out their attitudes toward advertising activities. In order to compute the average score, firstly reliability of the scale was analyzed, and two of the items are omitted for the scale to be reliable (this will be explained in detail in the next section). Average score which is calculated over the remaining 8 items is 3.29 over 5, which is slightly above the average. This indicates that, people have a positive attitude toward advertising activities. If it is necessary to talk about details, what people appreciate most is that, advertising activities enable them become conscious about products and services, with the average score of 4.05 over 5. The second strongest agreement with the score of 3.86 over 5 is advertising's consultancy of customers in giving purchase decisions.

It is interesting that, statements score above the average for both positive and negative statements. For example on the one hand, they believe advertising activities enable consumers become conscious about products and services, and help customers give purchase divisions. On the other hand, participants have agreed that advertising activities give overblown information to customers about products and services, with the score of 3.78 over 5. Thus, it is possible to say that people are aware of both positive and negative effects of advertising activities.

Mobile Marketing Services

Table 14 - Attitude Toward Mobile Marketing Services

	N	Mean	Std. Deviation
Connect to the Internet through mobile phone and search from Google, Yahoo etc.	347	4.2594	.89742
Be able to see important places around me like cafe, restaurant, pharmacy, gas station, hospital, bank, shop etc. from a mobile application	346	3.9884	.95698
Be able to see all events and social activities from a mobile application around	347	3.8991	.98760
Augmented reality (AR) applications as you see on Videos 2 and 3 (Ikea, Mini Cooper)	350	3.7886	1.04121
Be able to see all places that provide promotion, discount, campaign etc. from a mobile application	346	3.6243	1.12566
Prefer to follow campaigns and new products of stores I shop from through a mobile phone application, instead of receiving messages from firms	347	3.3719	1.18400
Receive SMS messages during shopping about products and campaigns which take place at that shop	346	3.3439	1.24187
Receive SMS about an activity (concerts, contest, festival, interesting outdoor activities about advertising campaigns) that is organized or sponsored by a brand	348	3.2471	1.22973
Advergame applications as you see on Videos 4 and 5 (Pepsi, Burger King)	348	3.0920	1.19202
Prefer the brand which runs a campaign that I can get free credit, minutes, SMS from etc.	347	3.0865	1.17218
Receive SMS from stores (clothing, accessory, technology etc.) I shop from about their campaigns	349	3.0573	1.28749
Download and use a mobile phone application developed by a specific brand	347	2.9942	1.17536

Table 14 - Attitude Toward Mobile Marketing Services (Continued)

	N	Mean	Std. Deviation
Receive SMS from service providers (supermarket, café, air line etc.) I shop from about their campaigns	349	2.9799	1.26951
Receive SMS from stores (clothing, accessory, technology etc.) I shop from about new products and services	348	2.9310	1.27302
Share interesting advertising videos with friends from mobile phone	347	2.9193	1.21139
Download and use a general mobile phone application not developed by a specific brand	348	2.9080	1.19444
Receive SMS from service providers (supermarket, café, air line etc.) I shop from about new products and services	348	2.9052	1.22636
Willing to see advertising on the mobile phone applications in order to download them for free	348	2.8534	1.17555
See advertising while using various mobile applications (weather forecast, calendar, road map, news, instant messaging applications) in order to get free call minutes, credit or SMS	345	2.6057	1.24247
Receive IVR calls from brands, to be informed about their campaigns I have already attended (Video 1, Lipton)	350	2.6943	1.20206
Download and play a brands mobile phone game	347	2.5274	1.15364
See customized advertising on which I can see my name on an SMS or mobile banner advertising	347	2.5130	1.18113
Advertise via my mobile phone with my permission	348	2.4770	1.27808
Receive IVR calls from brands, to be informed about campaigns or advertising, like you see in video 1 (Lipton)	348	2.4684	1.16462

Table 14 - Attitude Toward Mobile Marketing Services (Continued)

	N	Mean	Std. Deviation
See advertising while using videocall service in order to get free call minutes, credit or SMS	344	2.4622	1.19463
Replace your regular ring tone with advertising music or jingles of brands, to get free credit, minutes, SMS, etc.	347	2.3862	1.25419
Willing to pay for mobile phone applications in order to use them without seeing any advertisements	348	2.2989	1.11438
See advertising while connecting to Internet through mobile phone	347	2.0403	0.96084
Tap (touch) the advertising that I see while connecting to Internet through my mobile phone	346	1.9827	1.06580
Valid N (listwise)	338		

Respondents of the questionnaire were asked to state how willing they might be to use 29 mobile marketing applications listed in Table 14. A 5-point likert scale was used from “Strongly Agree” to “Strongly Disagree”. Please see the means of these applications in the Table 14.

When analyzed in detail, connect to the Internet through a mobile phone and search from search engines like Google, Yahoo, etc. is the most popular mobile application according to the mean with the score of 4.26 over 5. Location based services (LBS) are also very popular. For example users graded 3.99 over 5 the application which enable them to see important places around like cafe, restaurant, pharmacy, gas station, hospital, bank, shop etc. from a mobile application. They also graded 3.90 over 5 the application which enable them to see all events and social activities from a mobile

application around; and graded 3.62 over 5 the application which enable them to see all places that provide promotion, discount, campaign etc. from a mobile application. Thus, it is possible to say that location based services (LBS) are the second most popular among all mobile marketing applications.

Augmented reality (AR), which is a new and promising technology, is also on top of the list with the score of 3.79 over 5. Besides, people prefer to follow campaigns and new products of stores they shop from through a mobile phone application, instead of receiving messages from firms, with the score of 3.37 over 5.

There is an interesting finding about receiving SMS. On the one hand, SMS is not a popular mobile marketing service with average score of agreement slightly below average, and participants do not prefer to receive SMS from stores or service providers (clothing, accessory, technology, supermarket, café, air line etc.) they shop from about their campaigns or new products and services, with scores of 3.06, 2.98, 2.93 and 2.91 over 5. On the other hand, respondents seem to agree to receive SMS messages during shopping about products and campaigns which take place at that shop, with the score of 3.34 over 5, and receive SMS about an activity (concerts, contest, festival, interesting outdoor activities about advertising campaigns) that is organized or sponsored by a brand, with the score of 3.25 over 5.

There is also another finding, which is about customized services and permission based advertising. Respondents of the questionnaire prefer neither to see customized advertising on which they can see their name on an SMS or mobile banner advertising (with the score of 2.51 over 5), nor to be advertised via their mobile phone with their permission (with the score of 2.48 over 5).

In addition to all, the least favourite among all applications is to tap advertising users see while connecting to mobile Internet with the score of 1.98 over 5. The second thing what respondents dislike is to see advertising while connecting to mobile Internet, with the score of 2.04 over 5. People are also not in favor of paying to apps to use without advertisements with the score of 2.30 over 5.

Evaluation Criteria of Mobile Marketing

Table 15 - Attitude Toward Importance Level Attributed Characteristics of Mobile Marketing

	N	Mean	Std. Deviation
Protect my personal information	343	4.6939	.63259
Not received if not given permission	342	4.6170	.64717
Not encountered too often to disturb me	344	4.6017	.63988
Being user friendly	344	4.4826	.68702
Being easily understandable	344	4.4622	.67765
Ability to ease my life	344	4.3488	.79748
Being developed by using advanced technology	343	4.2420	.81445
Enable me to make more economically advantageous choices	344	4.2035	.82553
Enable me to complete a task that I cannot do in another way	344	4.1570	.90274
Being free of charge or having low price	344	4.1541	.89513
Being entertaining	344	4.1192	.86073
Informing me as a customer	344	4.1192	.88741
Enable me to give more conscious consumer decisions	343	4.1020	.87096

Table 15 - Attitude Toward Importance Level Attributed Characteristics of Mobile Marketing (Continued)

	N	Mean	Std. Deviation
Making me feel I have a great command of the technology	343	4.0262	.95324
Help me explore new products and services	344	4.0029	.86222
Enable integration with social networks (Facebook, Twitter)	344	3.7151	1.14041
Being customized, specially developed for me	344	3.6599	1.09226
Being used by many people	343	3.2303	1.10924
Valid N (listwise)	338		

The fourth part of the questionnaire is composed of a set of questions that were asked to participants to find out the importance level for 18 factors. There was a 5-point interval scale ranging from "Very Important" to "Not Important At All". It was aimed by importance level scale to discover the impact of factors in mobile marketing applications and services. Table 15 shows the means of these factors.

When results are analyzed in detail, it is found that participants find privacy issues as the crucial factors, according to the means. They are most sensitive about their personal data being protected with the score of 4.60 over 5. In addition, they do not want to receive mobile marketing messages if they do not give permission with the score of 4.62 and they do not want mobile marketing applications and services to be distributed too often, either they give permission or not with the score of 4.60.

Functionality and ease related properties are also found important by respondents after privacy related factors. For instance, users want applications to be user friendly

with the score of 4.48 and easily understandable with the score of 4.46. In addition to being easily used, with the score of 4.34 participants also want services to ease their lives.

As survey is conducted among young and early adult people, it is not surprising that participants find important that advanced technology is used in development of services, as younger people are more interested in technology with the score of 4.24.

It is interesting that, economic concerns come afterwards. With the score of 4.20 over 5, respondents want services to enable them make more economically advantageous choices, and want mobile marketing applications to be free of charge or at least have low price with the value of 4.15 over 5.

In addition to all, factors like entertainment, informativeness, enabling to give more conscious consumer decisions, which enable users to think they have a command of technology and enable them to explore new products and services are also the factors that have above the average agreement with the scores between 4.12 and 4 over 5. Factors which are slightly above the average with score between 3 and 4 over 5 are social networking integration, being customized and being used by many people.

Scale Reliabilities

Scale About Attitude Toward Advertising in General

Reliability coefficient is a diagnostic measure that assesses the consistency of the entire scale, with Cronbach's alpha (Nunnally, 1979; Peter, 1979). In analysis of attitude toward advertising, reliability of scale was measured by using outcomes of negative statements by reverse coding.

Table 16 - Reliability: Item Total Scale

ITEMS	Number of Items	Reliability
Enable consciousness	10	.544
Help in purchase decision		
Enable increase product quality		
Give overblown information		
Cause purchase unnecessary products		
Companies waste sources		
Present imagery world		
Cause customers waste time		
Show similar consumer' standards	*deleted*	
Enable price decrease	*deleted*	

A 10-item scale was used to measure the Cronbach's Alpha was calculated 0.544 for 10 items. Since it is smaller than 0.60, it represents a low consistency of scale and could not be accepted as reliable. In order to increase the ratio, it is decided to eliminate one of the items in the calculations, which is "Show similar consumer' standards". Cronbach's Alpha was calculated again and found as 0.598. Although it is higher than the first calculation, it is still not high enough for the scale to be accepted as reliable and consistent. Thus, one more item is decided to eliminate, which was "Enable price decrease". As a result of these arrangements, Cronbach's Alpha is 0.611. It is generally agreed that Cronbach's alpha to be 0.70 (Robinson et al, 1991; Robinson & Shaver, 1973). However, in exploratory researches like this one, it may decrease to 0.60 (Robinson et al, 1991).

As a result, as Cronbach's Alpha values larger than 0.60 are acceptable in exploratory researches, 8 item scale is reliable and consistent. Thus, two of the items that are eliminated are not taken into consideration in calculation of average score, but descriptives are analyzed.

Scale About Attitude Toward Mobile Marketing Applications

In order to evaluate attitude toward mobile marketing applications, a 29 item scale was used. Cronbach's Alpha was found 0.910 which is greater than 0.70 and the scale is proved to be reliable.

It is common to calculate reliability for statement scales but not for scales that include list of services. However, calculating reliability proved that 29 mobile marketing applications in the scale hang together. There might have been some applications which had not been perceived as mobile marketing applications.

Scale About Characteristics of Mobile Marketing Applications

An 18 item scale was used in order to evaluate how important the characteristics of mobile marketing applications are. Cronbach's Alpha was found 0.880 which is greater than 0.70. Thus, the scale for characteristics is proved to be reliable.

It is not common to calculate reliability for scales that include list of attributes either. However, calculating reliability proved again that 18 attributed characteristics of mobile marketing applications in the scale are meaningful together.

Relational Findings

The findings of the statistical model take place in this part of the study. The models which were applied to test the hypotheses were correlation analysis, multiple regression, cluster, ANOVA anf t-Tests.

Correlation Analysis

Correlation analysis is done for the relations between attitude of consumers toward advertising in general and attitude toward mobile marketing.

Hypothesis 1: There is a positive correlation between consumers' attitudes toward advertising in general and attitudes toward mobile marketing.

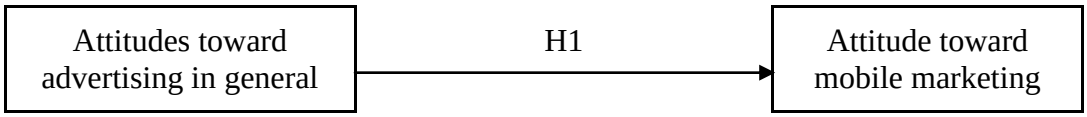


Table 17 – Correlations

		Att. Tow. Adw.	Att.T.Mo.Mktg
Attitude toward advertising in general	Personal Correlation	1	.208
	Sig. (2-tailed)		.000
	N	349	349
Attitude toward mobile marketing	Personal Correlation	.208	1
	Sig. (2-tailed)	.000	
	N	349	350

It is approved that there is a significant positive correlation between consumers' attitude toward advertising in general and attitude toward mobile advertising. Thus, the users who have a positive attitude toward advertising in general, also have a positive attitude

toward mobile marketing activities. The positive correlation is significant, as Sig. value is less than .005 with value of .000. Pearson Correlation is usually between 0 and 1. As the value is .208, it means there is a moderate correlation between the attitude toward advertising in general and attitude toward mobile advertising.

Multiple Regression Analysis

Hypothesis 2: Importance level attributed to various characteristics of mobile applications determines consumers' attitudes toward mobile applications.

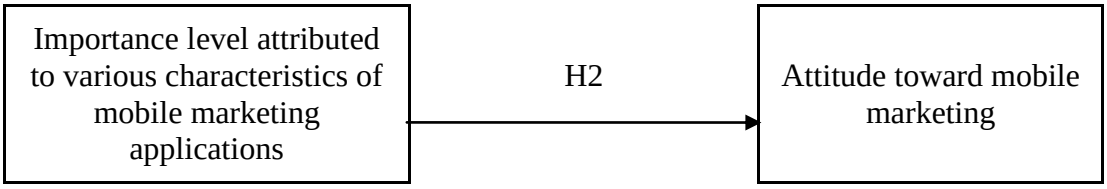


Table 18 - ANOVA table of Attitude Toward Mobile Marketing Regression Analysis

Model		Sum of Squares	Df	Mean Squate	F	Sig.
1	Regression	36.462	18	2.026	6.800	.000 [a]
	Residual	95.030	319	.298		
	Total	131.491	337			

a. Predictors: (Constant), Char18, Char2, Char17, Char15, Char14, Char6, Char11, Char13, Char10, Char1, Char5, Char8, Char3, Char12, Char16, Char7, Char9, Char4

b. Dependent Variable: Attitude Toward Mobile Marketing

According to the ANOVA table (Table 18) the predictive level by the dependent variables is high. Since the value of F is 6.800, it is possible to say that F is strongly significant. Besides, the significance level is under .05 with value of .000. Thus, it is

possible to say that users' attitudes toward mobile marketing can be predicted by the regression equation by the input variables.

Table 19 - Model Summary

Model	R	R square	Adjusted R square	Std. Error of the Estimate
1	.527[a]	.277	.237	.54580

a. Predictors: (Constant), Char18, Char2, Char17, Char15, Char14, Char6, Char11, Char13, Char10, Char1, Char5, Char8, Char3, Char12, Char16, Char7, Char9, Char4

b. Dependent Variable

R, which takes the value between -1 and +1, is .527 in this model of the research. Besides, R^2 which takes the values between 0 and 1, is calculated as .237. Closer the value of R to1, stronger the regression equation is, in terms of high predictive value. R and R^2 values show that the result of regression equation is very satisfying.

After determining that the regression equation is significant, it is needed to decide which characteristics of mobile marketing applications determine the users' attitude toward mobile marketing. Significance level is the crucial indicator and the characteristics which has significance lower than .05 determines the attitude toward mobile marketing applications.

Variables with significance under .05 are listed in Table 20 below.

Table 20 - Regression Coefficients of Dependent Variable Attitude Toward Mobile Marketing

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.291	.302		4.277	.000
Char1	Entertaining	.172	.044	.239	3.956	.000
Char6	Informing one as a customer	.146	.049	.207	2.946	.003
Char14	Integration with social networks	.079	.031	.144	2.538	.012
Char18	Enable one to complete a task that cannot be done in another way	-.105	.040	-.152	-2.606	.010

As a result, regression equation of users' attitude toward mobile marketing applications is as follows:

Attitude toward mobile marketing applications ≈

1.291 + 0.239 x (Char 1) + 0.207 x (Char 6) + 0.144 x (Char 14) – 0.152 x (Char 18)

The meaning of this equation is that, users' attitudes toward mobile marketing applications are determined by how much applications are entertaining, how much they inform customers, how much they are integrated with social networks like Facebook or Twitter, and how much they enable users to complete tasks that cannot be done in another way.

Cluster Analysis

Hypothesis 3: Consumers can be grouped according to the tendencies they show toward various mobile applications.

Mobile phone users are wanted to be classified according to their attitudes of mobile marketing applications and cluster analysis is performed for this purpose. In this study, 350 distinct mobile phone users were asked to indicate how willing they are to use 29 different services about mobile marketing applications. It was used a 5-point interval scale, from “Strongly Agree” to “Strongly Disagree”.

K-means method of cluster analysis has been conducted and three distinct groups of mobile users occurred. Random initial cluster centers were the starting point in the K-means method for clustering. Then, distances inside the cluster are minimized and distances between the clusters are maximized. In order to determine the final cluster centers, this iteration continued eleven times until the optimum point is found. Three groups were determined and they are efficient both statistically and conceptually as a result of cluster analysis. Characteristics of three different clusters present three different consumer segments which are defined as (1) Opportunists, (2) Advertising Enemies, and (3) Convenience Seekers. Table 21 shows the attitudes toward every mobile marketing application.

Table 21 - Final Sample Sizes and Cluster Centers of the Three Consumer Groups

	Cluster (n=338 ; missing=12)		
Cluster Size	Cluster 1 Opportunists n=160 (47%)	Cluster 2 Advertising Enemies n=51 (15%)	Cluster 3 Convenience Seekers n=127 (38%)
Receive SMS from stores I shop from about their campaigns	3.80	1.98	2.52
Receive SMS from s. prov. I shop from about their campaign	3.79	1.76	2.41
Receive SMS from stores I shop from about new product releases	3.73	1.86	2.33
Receive SMS from s. prov. I shop from about new products releases	3.78	1.73	2.26
Being advertised with permission	3.04	1.65	2.07
Receive SMS about an activity organized by brands	3.85	2.16	2.87
Download and play a brand's mobile phone games	2.94	1.59	2.37
Download and use a mobile phone application of a brand	3.38	1.78	2.99
Download and use a general mobile phone application	3.08	1.88	3.13
Willing to pay to apps to use without advertisements	2.53	1.73	2.21
Willing to see advertising on apps to download for free	3.20	1.80	2.80
Share interesting advertising videos from mobile handsets	3.33	1.80	2.82
Prefer to follow from a mobile phone application	3.75	1.82	3.50

Table 21 - Final Sample Sizes and Cluster Centers of the Three Consumer Groups (Continued)

	Cluster 1 Opportunists	Cluster 2 Advertising Enemies	Cluster 3 Convenience Seekers
Cluster Size	n=160 (47%)	n=51 (15%)	n=127 (38%)
Receive SMS messages during shopping	3.96	1.78	3.17
See important places around	4.22	3.02	4.10
See all places with promotion, discount, campaign etc.	4.14	1.98	3.66
See all events around	4.22	2.65	4.01
Search through mobile Internet	4.41	3.37	4.43
See advertising while videocall; get free minutes, credit, SMS	2.95	1.47	2.22
See advertising on mobile applications	3.23	1.53	2.47
See advertising while connecting to mobile Internet	2.39	1.39	1.84
Tap advertising I see while connecting to mobile Internet	2.36	1.43	1.72
See customized advertising (see my name)	3.11	1.41	2.17
Prefer to buy brands that enable to get free SMS. min.	3.65	1.76	2.91
IVR calls (Lipton video)	3.07	1.65	2.07
IVR calls, about campaigns I already attended (Lipton video)	3.35	1.73	2.31
Tone & Win	3.03	1.55	1.89
Augmented reality	4.04	2.73	3.89
Advergame applications	3.50	2.04	2.97

Cluster 1: Opportunists

First cluster, which is defined as “Opportunists”, consists of 160 respondents and represents 47% of whole sample. As a result of cluster analysis, it is clear that opportunists have a higher intention to use services which enable them to see important places around like cafe, restaurant, pharmacy, gas station, hospital, bank, shop etc. from a mobile application, which enable them to see all places that provide promotion, discount, campaign etc. from a mobile application or services which enable them to see all events and social activities from a mobile application around, with the scores between 4.14 and 4.22 over 5. Thus, it is obvious that opportunists are more likely to use location based services, compared to the other cluster groups. In addition to all, augmented reality applications are very favourable among opportunists.

It is seen that opportunists are seeking economic advantage and are sensitive to discounts or promotional activities in general.

Cluster 2: Advertising Enemies

Second group, which is defined as “Advertising Enemies”, consists of 51 participants which represent 15% of all respondents. This group is the one that has the most negative feelings about mobile marketing and advertising activities. That is the reason why they are called advertising enemies.

While advertising enemies are unfavourable about all mobile marketing services, what they like least are SMS and banner advertisements. For example advertising enemies grade applications which enable them to see advertising while connecting to Internet through mobile phone as 1.39 over 5, and applications that enable them to see customized advertising on which they can see my name on an SMS or mobile banner

advertising as 1.41 over 5. Other applications about advertising messages (SMS, banner and Interactive Voice Response) are also scored very low, between 1.43 and 1.55 over 5 even if they can get free credit, minutes, SMS, etc. by means of these advertising messages.

Although advertising enemies are against the mobile marketing applications, it is analyzed that they are less negative toward applications like augmented reality and advergames, as they indicated that they would use augmented reality applications with the score of 2.73 over 5, and advergame applications with the score of 2.04 over 5.

Cluster 3: Convenience Seekers

Finally, third group consists of 127 users which represent 38% of all participants, who are defined as "Convenience Seekers".

Internet search is the most distinct mobile marketing service which signifies the third cluster. Convenience seekers are strongly in favor of connecting to the Internet through mobile phone and search from Google, Yahoo etc, with the score of 4.43 over 5. In addition to mobile search, other applications which opportunists are in favour of are location based services. The service which enables users to see important places around them like cafe, restaurant, pharmacy, gas station, hospital, bank, shop etc. from a mobile application, with the score of 4.10 over 5 and the service that enables users to see all events and social activities from a mobile application around scored 4.01 over 5.

Determining if Cluster Analysis is Satisfactory

In ANOVA test, firstly it is analyzed if the cluster analysis is satisfactory or not. Values of F are computed in order to identify the significance level of differences between three

clusters for each of the twenty nine mobile marketing applications. As seen in the Table 22, this indicates that every mobile marketing application has significant differentiating value for different customer groups, which means the cluster analysis is outstanding.

Table 22 - Differentiating Power of Each Mobile Marketing Application in Cluster Analysis

Mobile Marketing Applications	F	Sig.
Receive SMS from s. prov. I shop from (new products)	151.654	0.000
See all places with promotion, discount, campaign etc.	121.785	0.000
Receive SMS from s. prov. I shop from (campaign)	112.588	0.000
Receive SMS from stores I shop from (new products)	99.127	0.000
Receive SMS messages during shopping	92.952	0.000
Receive SMS from stores I shop from (campaigns)	81.069	0.000
Prefer to buy brands that enable to get free SMS. min.	74.840	0.000
Prefer to follow from a mobile phone application	73.946	0.000
See all events around	69.415	0.000
See customized advertising (see my name)	65.910	0.000
IVR calls, about campaigns I already attended (Lipton video)	65.716	0.000
Receive SMS about an activity organized by brands	60.747	0.000
Tone & Win	56.520	0.000
IVR calls (Lipton video)	54.863	0.000
See advertising on mobile applications	50.557	0.000
Download and use a mobile phone application of a brand	44.484	0.000
See advertising while videocall; get free minutes, credit, SMS	41.261	0.000
Being advertised with permission	39.938	0.000
See important places around	38.460	0.000

Table 22 - Differentiating Power of Each Mobile Marketing Application in Cluster Analysis (Continued)

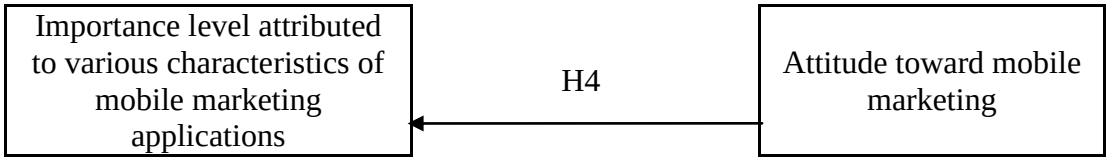
Mobile Marketing Applications	F	Sig.
Augmented reality	37.884	0.000
Share interesting advertising videos from mobile	37.360	0.000
Advergame applications	36.359	0.000
Search through mobile Internet	34.332	0.000
Download and play a brand's mobile phone games	33.574	0.000
Willing to see advertising on apps to download for free	32.516	0.000
See advertising while connecting to mobile Internet	29.738	0.000
Download and use a general mobile phone application	25.433	0.000
Tap advertising I see while connecting to mobile Internet	23.041	0.000
Willing to pay to apps to use without advertisements	11.156	0.000

The mobile marketing application which differentiates the clusters best is "Receiving SMS from service providers (supermarket, café, air line etc.) customers shop from about new products and services", with F value of 151.654. Application that enables consumers to "See all places that provide promotion, discount, campaign etc. from a mobile application" is the second best differentiation mobile marketing application with the F value of 121.785. "Receiving SMS from service providers (supermarket, café, air line etc.) users shop from about their campaigns" differentiate clusters with F value of 112.588 and "Receiving SMS from stores (clothing, accessory, technology etc.) they shop from about new products and services" also differentiate clusters with F value of 99.127. Other applications that differentiate clusters strongly are "Receiving SMS messages during shopping about products and campaigns which take place at that shop"

and “Receiving SMS from stores (clothing, accessory, technology etc.) consumers shop from about their campaigns” with F values of 92.952 and 81.069.

ANOVA Analysis

Hypothesis 4: Different groups of consumers with different attitudes toward mobile marketing applications also differ in terms of importance levels they attach to various attributes of mobile applications.



In this part of the study, consumer groups are analyzed in detail to differentiate clusters according to importance level of various characteristics of mobile applications. With oneway Anova test, it is found that consumer groups that were defined by cluster analysis are differentiated in the means of how important they think characteristics of mobile marketing applications are (Table 23).

Table 23 - Characteristics That Differentiate According to Clusters

Characteristics of Mobile Marketing Applications	F	Sig.
Being entertaining	25.174	.000
Help me explore new products and services	14.035	.000
Informing me as a customer	13.449	.000
Being developed by using advanced technology	13.296	.000
Making me feel I have a great command of the technology	13.250	.000
Enable integration with social networks (Facebook, Twitter)	12.955	.000

Table 23 - Characteristics That Differentiate According to Clusters (Continued)

Characteristics of Mobile Marketing Applications	F	Sig.
Being customized, specially developed for me	11.037	.000
Being used by many people	8.371	.000
Enable me to give more conscious consumer decisions	8.149	.000
Being user friendly	8.004	.000
Being easily understandable	7.510	.001
Enable me to make more economically advantageous choices	3.037	.040
Protect my personal information	2.906	.056
Ability to ease my life	3.021	.050
Being free of charge or having low price	2.308	.101
Enable me to complete a task that I cannot do in another way	.710	.492
Not encountered too often to disturb me	.571	.565
Not received if not given permission	.291	.748

Significance level has been determined to be 0.05, and it is found that consumers do not differ in all attributes, since some characteristics (like “Privacy”, “Monetary advantage”, “Voluntary Attendance” or “Facilitating”) are not significant at the 0.05 level between three groups of customers.

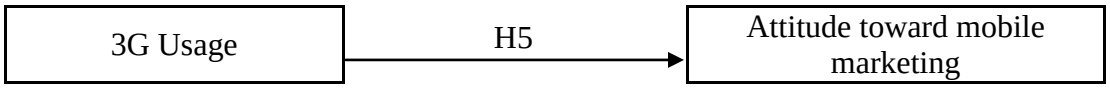
Attribute which differentiates groups most is “Entertainment” with F value of 25.174. It is followed by “Helping explore new products and services” with F value of 14.035, “Informativeness” with F value of 13.449, “Innovativeness” with F value of 13.296. Table 23 shows all the characteristics that are differentiated with significance level of 0.05.

Another finding is that, all the differentiated characteristics are found to be important most by Opportunists (Cluster 1), second by Convenience Seekers (Cluster 3) and found to be important least by Advertising Enemies (Cluster 2), except the "Network Effect" which is asked by "Being used by many people". With the mean of 3.48, "Network Effect" is found important mostly by Opportunists just like other attributes. However, Convenience Seekers (with mean of 2.97) find it less important than Advertising Enemies (with mean of 3.04). This means that Convenience Seekers do pay importance whether the applications are used by other people, or not.

T-Tests

T-Test for 3G Usage

Hypothesis 5: There is a significant difference in attitudes toward mobile marketing between 3G users and 3G nonusers.



In order to find out if 3G usage makes a significant different in attitude toward mobile marketing, we used two tailed T-test to assess whether the means of 3G users and nonusers are statistically different from each other. With the significances of .021 and .020, it is proved that two groups statistically differ from each other, as the significances are below .05.

3G users are significantly different in some of the mobile marketing applications. As it is seen in Table 24, 3G users are most positive about searching through mobile Internet with mean of 4.4937 over 5. Seeing important places around is the second most

important mobile application with the average of 4.1338 over 5, and seeing all events around is the third most popular application with the mean of 4.0823 over 5. 3G users are also very positive about augmented reality applications, seeing all places with promotion, discount, campaign, etc., following campaigns and new products of stores they shop from through a mobile phone application, instead of receiving messages from firms, download and use a mobile phone application of a brand and finally prefer to buy brands that enable them get free SMS, minutes or credits.

3G users are less positive about applications that enable them see customized advertising that they can see their names on, and download and play a brand's mobile phone games.

Table 24 - 3G

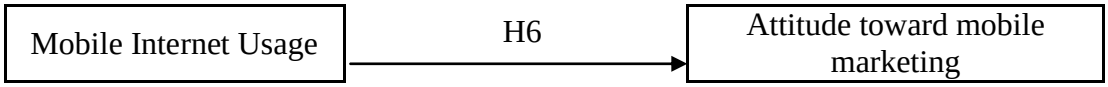
	N	Mean of 3G Users	t	Sign.
Download and play a brand's mobile phone games	157	2.7325	3.046	.002
	190	2.3579	2.998	.003
Download and use a mobile phone application of a brand	158	3.2595	3.923	.000
	198	2.7725	3.907	.000
Prefer to follow campaigns and new products of stores I shop from through a mobile phone application, instead of receiving messages from firms	157	3.5159	2.072	.039
	190	3.2526	2.091	.037
Be able to see important places around me like cafe, restaurant, pharmacy, gas station, hospital, bank, shop etc. from a mobile application	157	4.1338	2.596	.010
	189	3.8677	2.658	.008
Be able to see all places that provide promotion, discount, campaign etc. from a mobile application	157	3.8025	2.709	.007
	189	3.4762	2.725	.007

Table 24 - 3G (Continued)

	N	Mean of 3G Users	t	Sign.
Be able to see all events and social activities from a mobile application around	158	4.0823	3.200	.002
	189	3.7460	3.249	.001
Connect to the Internet through mobile phone and search from Google, Yahoo etc.	158	4.4937	4.573	.000
	189	4.0635	4.732	.000
See customized advertising on which I can see my name on an SMS or mobile banner advertising	158	2.7278	3.138	.002
	189	2.3333	3.093	.002
Prefer the brand which runs a campaign that I can get free credit, minutes, SMS from etc.	158	3.2405	2.251	.025
	189	2.9577	2.252	.025
Augmented reality (AR) applications as you see on Videos 2 and 3 (Ikea, Mini Cooper)	159	3.9182	2.137	.033
	191	3.6806	2.143	.033
Average	159	3.0442	2.316	.021
	191	2.8918	2.346	.020

T-Test for Mobile Internet Users

Hypothesis 6: There is a significant difference in attitudes toward mobile marketing between mobile Internet users and mobile Internet nonusers.



In order to find out if mobile Internet usage makes a significant different in attitude toward mobile marketing, we used two tailed T-test to assess whether the means of mobile Internet users and nonusers are statistically different from each other. With the

significances of .000 and .000, it is proved that two groups statistically differ from each other, as the significances are below .050.

Mobile Internet users are significantly more positive in some of the mobile marketing applications, just like 3G users. As it is seen in Table 25, mobile Internet users are most positive about searching through mobile Internet with mean of 4.4978 over 5. Seeing important places around is the second most important mobile application with the average of 4.0917 over 5, and third most popular application is seeing all events around with the mean of 4.0524 over 5. Attitude of mobile Internet users toward mobile marketing applications is similar to 3G users, as they are also very positive about augmented reality applications, seeing all places with promotion, discount, campaign, etc., following campaigns and new products of stores they shop from through a mobile phone application, instead of receiving messages from firms, and prefer to buy brands that enable them get free SMS, minutes or credits.

In contrast to 3G users, mobile Internet users are less positive about IVR calls. However, mobile Internet users are less positive about seeing customized advertising that they can see their names on, and download and play a brand's mobile phone games, just like 3G users.

Table 25 - Mobile Internet

	N	Mean of 3G Users	T	Sign.
Download and play a brand's mobile phone games	230	2.6652	3.161	.002
	117	2.2564	3.193	.002
Download and use a mobile phone application of a brand	230	3.1783	4.186	.000
	117	2.6325	4.211	.000
Download and use a general mobile phone application	231	3.0519	3.200	.002
	117	2.6239	3.179	.002
Willing to see advertising on applications to download for free	231	2.9827	2.913	.004
	117	2.5983	2.916	.004
Share interesting advertising videos from mobile	230	3.0174	2.125	.034
	117	2.7265	2.075	.039
Prefer to follow campaigns and new products of stores I shop from through a mobile phone application, instead of receiving messages from firms	230	3.5348	3.660	.000
	117	3.0513	3.486	.0001
Be able to see important places around me like cafe, restaurant, pharmacy, gas station, hospital, bank, shop etc. from a mobile application	229	4.0917	2.837	.005
	117	3.7863	2.626	.009
Be able to see all places that provide promotion, discount, campaign etc. from a mobile application	229	3.7424	2.756	.006
	117	3.3932	2.660	.008
Be able to see all events and social activities from a mobile application around	229	4.0524	4.119	.000
	118	3.6017	3.745	.000
Connect to the Internet through mobile phone and search from Google, Yahoo etc.	229	4.4978	7.413	.000
	118	3.7966	6.131	.000
See customized advertising on which I can see my name on an SMS or mobile banner advertising	229	2.6550	3.161	.002
	118	2.2373	3.179	.002
Prefer the brand which runs a campaign that I can get free credit, minutes, SMS from etc.	229	3.1965	2.454	.015
	118	2.8729	2.394	.018

Table 25 - Mobile Internet (Continued)

	N	Mean of 3G Users	T	Sign.
Receive IVR calls from brands, to be informed about campaigns or advertising, like you see in video 1 (Lipton)	231	2.5671	2.234	.026
	117	2.2735	2.235	.026
Augmented reality (AR) applications as you see on Videos 2 and 3 (Ikea, Mini Cooper)	232	3.9267	3.538	.000
	118	3.5169	3.387	.001
Average	232	3.0548	4.075	.000
	118	2.7767	3.660	.000

CHAPTER 6

CONCLUSION

This study provides a comprehensive list of studies on usage of current mobile marketing services and evaluation of potential future applications in Turkey. A detailed literature survey has been conducted on mobile marketing services which are SMS (Short Message Service), sales promotions and discounts, mobile Internet, LBS (Location Based Services), mobile applications, advergame, IVR (Interactive Voice Response), mobile viral marketing, mobile AR (Augmenter Reality), Tone & Win, permission marketing.

After the data gathering phase, data of 350 participants were analyzed with like descriptive analysis, correlation analysis, multiple regression analysis, cluster analysis, ANOVA analysis, and T-tests. There are numerous implications for the findings of the analyses.

Descriptive findings suggest that majority of the participants (61.1 %) are between the age of 24-29, and 9.17 % are below the age of 35. Besides, all the participants are at least undergraduate students, and 83.7 % are master students or graduates of a master program. These results indicate that respondents fit the target group for this survey. Besides, 81.1 % of the participants use mobile phones more than 8 years. In addition, nearly half of the respondents (45.4 %) are 3G subscribers and 66.3 % of subscribers use connect to the Internet through mobile handset, which confirm that participants are experienced enough to contribute to this study.

In terms of measuring users' attitude toward advertising in general, on the one hand consumers have a positive attitude toward advertising. But on the other hand, consumers are aware of both advantages and disadvantages.

The most general implication of the study is that, while some of the services of mobile marketing are very popular among highly educated young people, some of the services are not so popular. If it is needed to talk in details, mobile search is the most famous service among all items. Location based services follow mobile search, as participants are in favor of seeing what is around their location. Augmented reality technology is another item that respondents indicate they highly prefer to use, as well as the mobile applications. An interesting finding is that, while users indicate that they like to receive SMS about promotions or discounts, just at the moment they are shopping, or SMS about activities like concerts, contest festival, interesting outdoor activities, etc., they are not so much in favor of receiving neither like nor dislike receiving SMS about discounts, promotions of new product releases sent by shops or service providers.

In addition to all, mobile marketing applications' characteristics were evaluated according to their importance levels, by respondents of the survey questionnaire. Thus, 18 factors were evaluated, characteristics related to protection of personal information are evaluated to be the most important factor by participants. The most significant finding is that, all of the characteristics are found important by participants, as they ranked above the average. Some of them are strongly above the average, while some are slightly above the average.

It is possible to see "permission" in the second level of importance, as respondents do not want to receive mobile marketing messages if not given permission.

Ease of use and being user friendly are other characteristics that participants give importance to.

Three characteristics, which are also above the average, are found to be least important among all items are. They are network effect, which determines how many people use applications, being customized and being integrated with social networking.

The next finding of the study is that, there is a positive correlation between attitudes of consumers toward advertising and attitude of consumers toward mobile marketing. Correlation is not only significant, but also strong. Thus, it is proved that users who have a positive attitude toward advertising in general, also have a positive attitude toward mobile marketing activities.

Another considerable finding of the study is that, consumers' attitudes toward mobile applications are determined by importance levels attributes to various characteristics of mobile applications. In order to analyse this relationship, multiple regression analysis have been done.

It is also found that importance level attributed to various characteristics of mobile marketing applications, affect attitude of consumers toward mobile marketing activities. Besides, attitude of consumers toward mobile marketing activities can be predicted by regression. Four factors that have input to attitude of consumers toward mobile marketing activities in the regression are entertainment, informativeness, social networking integration and completing a task that can not be done in another way. Users who have a positive attitude toward mobile marketing services, find these 4 characteristics important.

In addition to all these findings, it is found that mobile phone users are grouped according to their attitudes toward mobile marketing services. As a result of cluster analysis, three different groups of mobile phone users were defined, which are called Opportunists, Advertising Enemies, and Convenience Seekers.

Opportunists consist of 47 % of the sample, and they have a higher intention to use services which enable them to see important places around their location from a mobile application, whether these places provide promotions, discounts, campaigns or not. It is clear that opportunists are sensitive to discounts or promotional activities in general, and are seeking economic advantage.

Advertising enemies, which represents 15 % of all participants, is the group that has the most negative feelings about mobile marketing applications. The main reason why they are called advertising enemies is that, they are unfavourable about all mobile marketing services. What they are most negative about are SMS and banner advertisements, like applications which enable them to see advertising while connecting to Internet through mobile phone, and applications that enable them to see customized advertising on which they can see their names on an SMS or mobile banner advertising.

The third and final group, which is called Convenience Seekers, represents 38% of all respondents. The most distinct mobile marketing service which signifies the third cluster is Internet search, as they are in favor of connecting to the Internet through mobile phone and search from Google, Yahoo etc. Location based services are other applications which opportunists have a positive attitude.

After that, ANOVA analysis is done and it is found out that these different groups of consumers, who have different attitude toward mobile marketing, also differ in

terms of importance levels attributed to characteristics of mobile marketing services. While significance level has been determined to be 0.05, it is found that consumers do not differ in all attributes. Attribute which differentiates clusters most is "Entertainment", with is followed by "Helping explore new products and services", "Informativeness", and "Innovativeness".

Another finding is that, all the differentiated characteristics are found to be important most by Opportunists, then by Convenience Seekers and found to be important least by Advertising Enemies, except the "Network Effect". Network Effect which is asked by question "Being used by many people" is found important mostly by Opportunists just like other attributes. However, Convenience Seekers find it less important than Advertising Enemies. As a result, it is possible to say that Convenience Seekers do pay importance if the applications are used by other people or not.

In addition to all, T-tests were done to analyse the relationship between 3G usage and attitude toward mobile marketing, and to analyse the relationship between mobile Internet usage and attitude toward mobile marketing. It is proved that, 3G users and nonusers differ in the means of attitude toward mobile marketing, as well as mobile Internet users and nonusers.

CHAPTER 7

IMPLICATIONS

This study is a guide for companies in the means of supplying mobile marketing services and applications. In the further marketing applications, it is advised that companies give place to mobile marketing services, especially when they target young and early adults. Besides, it is very fundamental that types of applications should be chosen according to customer preferences.

It is advised that mobile Internet services, especially mobile search needs to find place in marketing mix. Besides mobile search, location based services are very popular among all mobile marketing services. Users like to see all events and places with promotion, discount, campaign, etc. around them. In addition to location based services, it is advices that companies use augmented reality technology in their services, as attitude toward this technology is positive. Apart from all, mobile users are in favor of using mobile applications of companies.

It is also advices to companies to be careful about SMS advertising messages, as there is a negative attitude toward SMS services. However, customers have a positive attitude toward SMS only if they are sent while customers are shopping and if they are sent by the companies which customer shop from.

Besides all, users have a very negative attitude toward seeing advertising during various services like videocall, mobile search, IVR calls or tone and win, even if these advertising messages are highly personalized. Consumers are less negative about seeing advertising only if they can download and use applications for free. Companies need to

pay great attention to preferences of consumers and develop their campaigns accordingly.

Besides, feedback mechanisms should be implemented. Reporting tools should be developed to track consumer response, in order to evaluate performance of campaigns. Thus, it is possible to run similar campaigns, and not conduct campaigns that are not successful.

In addition to all, it is very important that mobile marketing services should not be evaluated as seperate medium. They need to take place in general marketing strategy of companies as a complementary member of marketing mix.

CHAPTER 8

LIMITATIONS

This study also has some limitations. First of the limitations is about sample targeting and data collection problems. The survey has been conducted among a group that consists of highly educated people who has mobile marketing experience. Besides high amount of participants use sophisticated mobile phones. While, this group was targeted intentionally to present attitudes of people that use mobile marketing applications, it is a limitation as well, as this group does not represent all mobile phones users.

In further researches, the study may be done among a wider range of participants from different educational levels, socioeconomic status, etc. Besides, further researchers may be conducted a survey in which the importance level of characteristics are asked separately for every distinct mobile marketing service or application.

Another limitation of this study is that, questions about importance level of characteristics of mobile marketing are very general and could not be detailed for different situations. It is possible that participants think one kind of characteristic is important for a specific mobile marketing service, but not important for another mobile marketing application. Besides, as some of the applications are very new for participants, it was not very easy to understand the questions, although some videos have been showed to clarify the concepts.

APPENDIX A

QUESTIONNAIRE (ENGLISH)

Dear Participant,

This questionnaire study is prepared for the master thesis about "Mobile Marketing Applications" by Berna Akın, who is a graduate student in Management Information System Department under the advisory of Assist. Prof. Dr. Hande Kımıloğlu. All the questions must be answered completely for your questionnaire to be included in the study.

Thank you for your contribution to our study.

1. Your age group:
   - 18-23 ___
   - 24-29 ___
   - 30-35 ___
   - 36-41 ___
   - 42-47 ___
   - 48-53 ___
   - 54-59 ___
   - Over 60 ___

2. Your gender:
   - Female ___
   - Male ___

3. Your marital status:
   - Single ____
   - Married ____

4. Your education level:
   - High School graduate ___
   - University student ___
   - University graduate ___
   - Master student ___
   - Master graduate ___

5. Your monthly income:
   - Under 1000 TL ___
   - 1000-2000 TL ___
   - 2000-3500 TL ___
   - 3500-5000 TL ___
   - Over 5000 TL ___

6. For how many years have you been using a mobile phone?
   - 0-3 years ____
   - 4-7 years ____
   - More than 8 years ____

7. Mobile phone brand that you are using: _____

8. GSM operator that you are subscriber of (You can choose more than one):
   Avea ___ Turkcell ___ Vodafone___

9. Are you a 3G subscriber?
   - Yes ___
   - No ___

10. Do you use Internet via your mobile phone?
    - Yes ___
    - No ___

Figure 2 - Questionnaire (English)

11. Please state your agreement level with each of the following statements about advertising activities of companies and brands in general.

Advertising activities of companies:	Strongly Agree	Agree	Neither Agree Nor Disagree	Disagree	Strongly Disagree
Enable customers to become informed about products and services.					
Give exaggerated information to customers about products and services.					
Help customers make purchase decisions.					
Trigger customers to purchase products or services which they do not need.					
Show customers what is consumed by other people who have similar living standards.					
Enable prices to decrease by increasing competition.					
Enable quality of products and services to increase by intensifying competition.					
Cause companies to waste their resources that could be used for more beneficial purposes otherwise.					
Present an imagery world to consumers.					
Cause consumers to waste their time.					

Figure 2 - Questionnaire (English) Continued

12. Please state your agreement level about how willing you are to use each of the following services about mobile marketing applications.

	Strongly Agree	Agree	Neither Agree Nor Disagree	Disagree	Strongly Disagree
Receive SMS from stores (clothing, accessory, technology etc.) I shop from about their campaigns					
Receive SMS from service providers (supermarket, café, air line etc.) I shop from about their campaigns					
Receive SMS from stores (clothing, accessory, technology etc.) I shop from about new products and services					
Receive SMS from service providers (supermarket, café, air line etc.) I shop from about new products and services					
Advertise via my mobile phone with my permission					
Receive SMS about an activity (concerts, contest, festival, interesting outdoor activities about advertising campaigns) that is organized or sponsored by a brand					
Download and play a brands mobile phone game					
Download and use a mobile phone application developed by a specific brand					
Download and use a general mobile phone application not developed by a specific brand					
Willing to pay for mobile phone applications in order to use them without seeing any advertisements					
Willing to see advertising on the mobile phone applications in order to download them for free					
Share interesting advertising videos with friends from mobile phone					
Prefer to follow campaigns and new products of stores I shop from through a mobile phone application, instead of receiving messages from firms					
Receive SMS messages during shopping about products and campaigns which take place at that shop					
Be able to see important places around me like cafe, restaurant, pharmacy, gas station, hospital, bank, shop etc. from a mobile application					

Figure 2 - Questionnaire (English) Continued

	Strongly Agree	Agree	Neither Agree Nor Disagree	Disagree	Strongly Disagree
Be able to see all places that provide promotion, discount, campaign etc. from a mobile application					
Be able to see all events and social activities from a mobile application					
Connect to the Internet through mobile phone and search from Google, Yahoo etc.					
See advertising while using videocall service in order to get free call minutes, credit or SMS					
See advertising while using various mobile applications (weather forecast, calendar, road map, news, instant messaging applications) in order to get free call minutes, credit or SMS					
See advertising while connecting to Internet through mobile phone					
Tap (touch) the advertising that I see while connecting to Internet through my mobile phone					
See customised advertising on which I can see my name on an SMS or mobile banner advertising					
Prefer the brand which runs a campaign that I can get free credit, minutes, SMS from etc.					
Receive IVR calls from brands, to be informed about campaigns or advertising, like you see in video 1 (Lipton)					
Receive IVR calls from brands, to be informed about their campaigns I have already attended (Video 1, Lipton)					
Replace your regular ring tone with advertising music or jingles of brands, to get free credit, minutes, SMS, etc.					
Augmented Reality (AR) applications as you see on Videos 2 and 3 (Ikea, Mini Cooper)					
Advergame applications as you see on Videos 4 and 5 (Pepsi, Burger King)					

Figure 2 - Questionnaire (English) Continued

13. Please state the importance of each of the following factors which are realized through mobile phone, smart phone, mobile computer, etc.

	Very Important	Partially Important	Neither Important Nor Unimportant	Not Very Important	Not Important At All
Being entertaining					
Being developed by using advanced technology					
Making me feel I have a great command of the technology					
Being user friendly					
Being easily understandable					
Informing me as a customer					
Help me explore new products and services					
Enable me to give more conscious consumer decisions					
Enable me to make more economically advantageous choices					
Being customized, specially developed for me					
Being free of charge or having low price					
Ability to ease my life					
Protect my personal information					
Enable integration with social networks (Facebook, Twitter, etc.)					
Not encountered too often to disturb me					
Not received if not given permission					
Being used by many people					
Enable me to complete a task that I cannot do in another way					

Figure 2 - Questionnaire (English) Continued

APPENDIX B

QUESTIONNAIRE (TURKISH)

Sayın Katılımcı,

Bu anket çalışması Boğaziçi Üniversitesi Yönetim Bilişim Sistemleri Bölümü Yüksek Lisans öğrencisi Berna Akın'ın, Yrd. Doç. Dr. Hande Kımıloğlu danışmanlığında yürütmekte olduğu "Mobil Pazarlama Uygulamaları" konulu master tezi kapsamında gerçekleştirilmektedir. Ankete katılmak için isminizi belirtmeniz gerekmemektedir. Çalışmadan sonuç alınabilmesi için anketteki tüm soruların yanıtlanmasına gerek duyulmaktadır.

Katılımınız ve katkınız için teşekkür ederiz.

1. Yaş grubunuzu belirtiniz:
   - 18-23 ___
   - 24-29 ___
   - 30-35 ___
   - 36-41 ___
   - 42-47 ___
   - 48-53 ___
   - 54-59 ___
   - 60 yaş ve üstü ___

2. Cinsiyetiniz:
   - Kadın ___
   - Erkek ___

3. Medeni durumunuz:
   - Bekar ____
   - Evli ____

4. Eğitim durumunuz:
   - Lise mezunu ___
   - Üniversite öğrencisi ___
   - Üniversite mezunu ___
   - Lisansüstü öğrencisi ___
   - Lisansüstü mezunu ___

5. Aylık ortalama kişisel geliriniz:
   - 1000 TL ve altı ___
   - 1000-2000 TL ___
   - 2000-3500 TL ___
   - 3500-5000 TL ___
   - 5000 TL'den fazla ___

6. Kaç yıldır cep telefonu kullanıyorsunuz?
   - 0-3 yıl ____
   - 4-7 yıl ____
   - 8 yıldan fazla ____

7. Kullandığınız cep telefonunun markası: _____

8. Abone olduğunuz GSM operatörü (Birden fazla seçenek işaretleyebilirsiniz):
   Avea ___ Turkcell ___ Vodafone___

9. 3G abonesi misiniz?
   - Evet ___
   - Hayır ___

10. Cep telefonunuzdan Internet'e giriyor musunuz?
    - Evet ___
    - Hayır ___

Figure 3 - Questionnaire (Turkish)

11. Lütfen firmaların reklam ve tanıtım faaliyetleri ile ilgili aşağıdaki ifadelere ne derece katıldığınızı belirtiniz.

	Kesinlikle Katılıyorum	Katılıyorum	Kararsızım	Katılmıyorum	Kesinlikle Katılmıyorum
Tüketicilerin ürün ve hizmetler hakkında bilgilenmesini sağlar.					
Tüketicilere ürün ve hizmetler ile ilgili abartılmış bilgiler verir.					
Tüketicilerin satınalma kararlarını vermelerinde yardımcı olur.					
Tüketicilere aslında ihtiyaçları olmayan ürün ve hizmetlerin satılmasına yol açar.					
Tüketicilere kendilerininkine benzeyen yaşam standartlarına sahip kişilerin neler tükettiklerini gösterir.					
Firmalar arasındaki rekabeti kızıştırarak fiyatların düşmesini sağlar.					
Firmalar arasındaki rekabeti kızıştırarak ürün ve hizmet kalitesinin artmasını sağlar.					
Firmaların daha faydalı biçimde kullanabilecekleri kaynaklarını israf etmelerine yol açar.					
Tüketicilere gerçek olmayan bir dünya sunar.					
Tüketicilerin zamanını çalar.					

Figure 3 - Questionnaire (Turkish) Continued

12. Lütfen aşağıda listelenen çeşitli mobil uygulamalardan herbirini kullanma konusunda ne derece istekli olabileceğinizi ölçek üzerinde belirtiniz.

	Kesinlikle Katılıyorum	Katılıyorum	Kararsızım	Katılmıyorum	Kesinlikle Katılmıyorum
Müşterisi olduğum mağazaların (giyim, aksesuar, teknoloji market, vb.) kampanyalarını bildiren SMS almak					
Müşterisi olduğum hizmet kuruluşlarının (süpermarket, cafe, havayolu şirketi, banka, vb.) kampanyalarını bildiren SMS almak					
Müşterisi olduğum mağazaların (giyim, aksesuar, teknoloji market, vb.) yeni ürün ve hizmetlerinin tanıtımını bildiren SMS almak					
Müşterisi olduğum hizmet kuruluşlarının (süpermarket, cafe, havayolu şirketi, banka, vb.) yeni ürün ve hizmetlerinin tanıtımını bildiren SMS almak					
Benim iznimle markaların cep telefonum üzerinden reklam yapması					
Bir markanın düzenlediği/sponsor olduğu bir aktiviteyi (konser, yarışma, festival, dış mekanlarda yapılan ilginç tanıtım kampanyaları gibi) bildiren SMS almak					
Markaların cep telefonu oyunlarını indirmek ve oynamak					
Belli bir markaya ait bir uygulamayı cep telefonuma indirmak ve kullanmak					
Belli bir markaya ait olmayan genel bir uygulamayı cep telefonuma indirmek ve kullanmak					
Cep telefonuma indirdiğim uygulamaların reklamsız olmaları için ekstra ücret ödemeyi göze almak					
Cep telefonuma indirdiğim uygulamaların ücretsiz olması karşılığında reklam görmeyi kabul etmek					
Cep telefonundan izlediğim ilginç reklam videolarını paylaşmak					
Müşterisi olduğum mağazaların ya da hizmet kuruluşlarının kampanyalarını, yeni ürünlerini, vs. firmanın bana bildirmesi yerine, kendi cep telefonumdaki özel bir uygulamayla takip edebilmek					
Bir mağaza ya da markette alışveriş yaptığınız esnada oradaki ürün veya markaların kampanyalarını bildiren SMS almak					
Bulunduğum yerin yakınındaki cafe, restoran, eczane, benzin istasyonu, hastane, banka, mağaza, vb. önemli yerleri bir mobil uygulamayla görebilmek					
Bulunduğum yerin yakınındaki bütün promosyon, indirim, kampanya, vs. olan yerleri bir mobil uygulamayla görebilmek					

Figure 3 - Questionnaire (Turkish) Continued

	Kesinlikle Katılıyorum	Katılıyorum	Kararsızım	Katılmıyorum	Kesinlikle Katılmıyorum
Bulunduğum yerin yakınındaki etkinlik, sosyal aktivite ve eğlence olaylarını bir mobil uygulamayla görebilmek					
Cep telefonundan Internet'e girerek Google, Yahoo, vs.'den arama yapmak					
Cep telefonu ile görüntülü görüşme yapma esnasında ekranın altında, üstünde ya da yanında bana kontör, dakika, SMS, vs. kazandıracak reklamların çıkması					
Cep telefonundaki çeşitli uygulamaları kullanırken (hava durumu, takvim, trafik, yol haritası, haberler, mesajlaşma uygulamaları gibi) bana kontör, dakika, SMS, vs. kazandıracak reklamların çıkması					
Cep telefonundan Internet kullanırken reklam görmek					
Cep telefonundan Internet kullanırken çıkan reklamlara tıklamak					
Cep telefonumda adımın göründüğü, bana özel hazırlanmış bir SMS ya da banner reklamı görmek					
Alışveriş yaparken, kontör, dakika, SMS, vs. kazandıran promosyonlu markayı tercih etmek					
Video 1'deki (Lipton) gibi, herhangi bir markanın bir kampanya ya da tanıtımını bildiren otomatik sesli mesaj almak					
Katılmış olduğum bir kampanya ile ilgili otomatik sesli mesaj almak (Video 1, Lipton)					
Kontör, dakika, SMS, vs. kazanmak için, cep telefonunuz arandığında standart çalma sesi yerine belli bir markanın reklam müziğinin çalması					
Video 2 ve 3'te (Ikea, Mini Cooper) izlediğiniz gibi sanal gerçeklik uygulamaları					
Video 4 ve 5'te (Pepsi, Burger King) izlediğiniz gibi advergame (marka oyunları) uygulamaları					

Figure 3 - Questionnaire (Turkish) Continued

13. Lütfen cep telefonu, akıllı telefon, mobil bilgisayar vb. gibi cihazlar üzerinden gerçekleştirilebilen çeşitli mobil pazarlama uygulamaları ile ilgili aşağıdaki özelliklerin herbirinin ne derece önemli olduğunu ölçek üzerinde belirtiniz.

	Çok Önemli	Önemli	Ne Önemli Ne Önemsiz	Önemsiz	Hiç Önemli Değil
Eğlenceli olması					
İleri teknoloji ile hazırlanmış olması					
Bana teknolojiye hakim olduğumu hissettirmesi					
Kullanımının kolay olması					
Kolay anlaşılır olması					
Beni bir tüketici olarak bilgilendirmesi					
Yeni ürün ya da hizmetleri keşfetmeme yardımcı olması					
Daha bilinçli tüketim kararları vermemi sağlaması					
Ekonomik olarak daha avantajlı seçimler yapmama yardımcı olması					
Bana özel geliştirilmiş olması					
Ücretsiz ya da ücretinin düşük olması					
Yaşamımı kolaylaştırması					
Kişisel bilgilerimin gizliliğini koruması					
Sosyal ağlarla (Facebook, Twitter, vb.) entegre olması					
Rahatsız edici sıklıkta karşıma çıkmaması					
İsteğim dışında gönderilmemesi					
Birçok insan tarafından kullanılıyor olması					
Başka biçimde halledemeyeceğim bir işi yapmamı sağlaması					

ANKETİMİZİ YANITLADIĞINIZ İÇİN ÇOK TEŞEKKÜR EDERİZ.

Figure 3 - Questionnaire (Turkish) Continued

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