THE DETERMINANTS OF AUDIENCE GRATIFICATION TOWARDS DIGITAL BILLBOARDS

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DECLARATION

We hereby declare that:

(1) This undergraduate research project is the end result of our own work and that due acknowledgement has been given in the references to ALL sources of information be they printed, electronic, or personal.

(2) No portion of this research project has been submitted in support of any application for any other degree or qualification of this or any other university, or other institutes of learning.

(3) Equal contribution has been made by each group member in completing the research project.

(4) The word count of this research report is 14,341.

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"An investment in knowledge always pays the best interest."

- Benjamin Franklin

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PREFACE

In today's world, the changing lifestyles of individuals are becoming more mobile and it has become a challenge to actively connect with consumers. Likewise, Marketers would face difficulties catching eyeballs in the changing digital environment using traditional advertising methods. As a result, marketers seek opportunity in advertising through digital billboards as one of the advertising medium.

More than ever before, digital billboard advertising has also manifested the ability to define one city's personality and identity. Besides, the tone of an entire urban landscape can be set by the giant combination of static and high-resolution motion pictures that gives a vivid visual impact among audiences. For example, major cities in respective countries have undergone a metamorphosis such as Tokyo in Japan, New York's Times Square, London's Piccadilly Circus, and Taipei in Taiwan are surrounded by large LED "billboard" screens. Nevertheless, Malaysia has no exceptions in embracing the digital impact. In fact, the amount of digital billboards has grown aggressively particularly in Kuala Lumpur city.

Regardless of how attractive or creative the advertisements are, marketers are keen to know the effectiveness of advertising via digital billboards among audiences. This is because viewers can perceive the advertisement positively or negatively and perhaps ignore the advertisement if it does not fulfil their desire after being exposed a certain period of time.

Therefore, the aim of this research is to assess audience gratification based on audience acceptance on digital billboards in Kuala Lumpur area. Additionally, this study helps marketers to identify and determine which factors has a greater influence on audiences' gratification towards digital billboards.

ABSTRACT

In the advertising industry, audience research is important to advertisers as well as marketers in order to deliver effective messages. In conjunction with the emerging trend of digitalization of billboards, this study is to determine the purposiveness and attentiveness of this infancy technology consumption that will create audience satisfaction based on the Uses and Gratification theory (U&G). Likewise,the factors that influences audience gratification will be drawn from the Technology Acceptance Model (TAM) namely digitalization, informativeness, irritation, and credibility. Moreover, reliability test using SPSS is conducted with the data obtained from 254 respondents that was randomly selected within Kuala Lumpur area. The results yield 'informativeness' variable has the strongest positive relationship on audience gratification towards digital billboards whereas the weakest significant correlation with audience gratification is 'irritation'. In addition, 'credibility' is found to have no significant relationship with audience gratification on digital billboards. Lastly, limitations and recommendations for future study have been discussed to guide future researchers in improving the quality of research in related field.

CHAPTER 1: RESEARCH OVERVIEW

1.0 Introduction

This research aims to identify the elements of audience gratification of digital billboards in Kuala Lumpur. The main areas emphases are on research background, problem statements, research questionsand research objectives, significance of the study, chapter layout and summary of the overall project.

1.1 Research background

According to Outdoor Advertising Association of America (OAAA), 2014 revealed that the Out of home (OOH) advertising is the second-fastest growing marketing medium next to Internet in the advertising industry. OOH advertising is also known as outdoor advertising with numerous standard advertising formats that are exposed to audiences outside from home. OOH comprises of four major categories, namely billboards, transit, street furniture, and alternative whereby billboards account the largest percentage of industry revenue among the categories in the United States.Billboards include bulletins, digital billboards, posters, junior posters, walls/spectaculars.

Billboards are one of the long-lasting medium segments and haveevolved to digital billboards (Adetunji & Yazam, 2012) for it is flexible and fluid among advertisers.In addition, digital billboards are considerably more economical and interactive than

traditional print billboards (Adetunji & Yazam, 2012 as cited in Michael, 2011). It is reported in recent studies that billboards are gradually replaced by digital displays andthe number of digital billboards implementation is increasing especially in major cities like Hong Kong, New York, and Kuala Lumpur.

In the United States, individuals with the age of 18 or older reportedly spend more than 70 percent of their waking hours outdoor which advertisers will face challenge in gaining viewer's attention if by relying mainly or heavily on conventional printed billboards to deliver message (Outdoor Advertising Association of America, Inc. (oaaa), 2014). Similarly, printed advertisements on billboards cannot be changed as often as digital billboards hence; frequent viewing of the same advertisements by audience will cause intention to avoid or ignore the advertisement.Thus, the influence of technology has not only dramatically increase the efficiency of tracking the advertisements projected on digital billboards by marketers but also improved the displays on digital billboards in terms of increase in amount of information, motions and quality in attracting audience's attention (Lopez-Pumarjo & Bassell, 2009).

In the academic and practical industries of mass media and communications, audience research is important to advertisers (Winmer & Dominick, 2011) in determining the audiences' satisfaction of the advertising medium as well as the degree of reception of the message received by audience (Adetunji & Yazam, 2012).This is because audience can choose to ignore or receive any messages they desire (Saudat & Ridwan, 2012) and process messages negatively or positively by the message developer (Thompson, 1993) regardless of how persuasive or influential the media messages are.

Various studies adopted Technology Acceptance Model to investigate audience's attitude and willingness of accepting digital billboards (Lee & Lan, n.d.) and to understand how media and its messages are able to satisfy different audiences based on the uses and gratification theory (Adetunji & Yazam, 2012 as cited in Whitaker, Ramsey & Smith, 2004).Therefore, with the developing trend of advertising on digital billboards, it is necessary to determine audiences' gratificationstowards digital billboards with the influential variablesdrawn from the Technology Acceptance Model.

1.2 Problem Statement

Digital billboards have the ability to captivate large audiences and generate high recall rates due to repeated displays among audiences (Frost & Sullivan, 2010). For example, PowerScreen Malaysia, Malaysia's LED Digital Out-of-Home Network in Market Centres throughout Malaysia, revealed that each advertisement has 1,300 exposures per day in 12 selected locations with a minimum 39,000 exposures per month. Based on Q2'11 Nielsen Media index July 2010- June 2011 (NMR), advertisements can reach out to 4.45 million viewers monthly. Thus, marketers can maximize their opportunities in this changing advertising medium – digital billboard.

On the contrary, Lee &Lan (2010) cited that advertising through digital signage has a low acceptance rate among viewers in Taiwanbecause the transformational impact of digital signage is still in its infancy (as cited in Lee & Chang, 2009). In 2014, up to 4,400 billboards have been replaced by digital (LED) displays which is only 1 percent of the total number of billboards in the United States (Outdoor Advertising Association of America, Inc. (oaaa), 2014).In the study of Asian Digital Media Landscape, The Nielsen Company (2012) reported that as low as 1.1 percent of advertising expenditure goes towards outdoor advertising in Malaysia as compared to 40.3 percent of advertising expenditure on local newspapers based on Nielsen Southeast Asia Advertising Index 2011. Likewise, the number of digital billboards is increasing but at a very slow rate.

Other than that, the study on uses and gratification theory and Technology Acceptance Model on digital billboards is rather limited in examining individuals concerns towards the development of this new technology. The statement is further supported in a research by Adetunji & Yazam (2012).

In short, marketers foresee the advantages of advertising through digital billboards; however, there is a possibility of slow growth of digital billboards in terms of numbers as well as advertising expenditure is influenced by audience's acceptance of

the new technology. Therefore, this research is to determine which variable has significant impact on audience gratification on digital billboards which include digitalization, informativeness, irritation, and credibility.

1.3 Research Objective

The research objective can be divided into two sections which are general objective and specific objectives.

1.3.1 General Objective

The purpose of this research is to understand the overall determinants of digital advertising that influences audience's attitude. This study aims to assess the relationship between the four identified variables (digitalization, informativeness, irritation and credibility) towards audience gratification on digital billboards advertising. The specific objectives of the research are developed as follow:

1.3.2 Specific Objectives

1. To examine the relationship between digitalization and audience gratification on digital billboards advertising.

2. To examine the relationship between informativeness and audience gratification on digital billboards advertising.
3. To examine the relationship between irritation and audience gratification on digital billboards advertising.
4. To examine the relationship between credibility and audience gratification on digital billboards advertising.

1.4 Research Questions

The study conducted will attempt to answer the following questions:

1. Does digitalization influences audiences' gratification towards digital billboards?
2. To what extent the informativeness of digital billboards influence the audiences' gratification?
3. Are audiences experiencing or addressing irritation issues fromdigital billboards?
4. Do audiences perceive credibility in advertisements displayed on digital billboards?

1.5 Hypotheses of the Study

H1: *There is a significant relationship between digitalization and audience gratification on digital billboards.*

H2: *There is a significant relationship between informativeness and audience gratification on digital billboards.*

H3: *There is a negative relationship between irritation and audience gratification on digital billboards.*

H4: *There is a significant relationship between credibility and audience gratification on digital billboards.*

1.6 Significance of the Study

This research is to emphasize the factors that influence audiences' gratification towards digital billboards in Kuala Lumpur. The following relational elements are digitalization, informativeness, irritation, and credibility. By conducting this research, researchers could identify and evaluate the key factors of accepting digital billboards that affect audiences' gratification. Hence, this study would contribute to future researchers and academicians as a foundation to conduct the study in similar field.

The importance of advertising is to create awareness, to sell products, services, and delivering ideas to target audience (Edegoh et al., 2013). Therefore, the significance of this study would help marketers to ensure advertising messages are displayed and delivered effectively in the market with the identification of audience's perception on the emerging digital billboard advertising medium. In addition, the results and implications of this research would be useful not only to marketers but also relevant organizations that have the interest to deliver message via digital billboards. By providing a clearer insight of audience gratification on digital billboards, users would also find this research to be suitable in the process of decision-making and improving advertising strategy as the appropriate advertising channel may help toincrease competitive advantages as well as to create awareness to the right target audience

effectively. Therefore,marketers would benefit from this study in making the most strategic advertising decision.

1.7 Chapter Layout

Chapter 1: Introduction

This chapter is to provide the general view of the research project. This chapter includes background of the research, problem statement, research objectives, research questions, hypotheses and significance of the research study.

Chapter 2: Literature Review

This chapter is focusing on reviewing the literature from articles and journals that are published by other researchers. This literature review is to provide clearer view on the variables that are relevantto this research. It describes the determinants of audiences' gratification in digital billboards. The independent variables for this research can be found through literature review which includes digitalization, informativeness, irritation and credibility. Besides, the dependent variable for this research is audiences' gratification. Conceptual framework is set up and hypotheses development is further discussed in this chapter.

Chapter 3: Research Method

The overview of research methodology is further discussed in detail in this chapter. Methodology portrays how the research study has been taken in terms of research

design, data collection methods, sampling design, research instrument, constructs measurement, data processing and data analysis.

Chapter 4: Data Analysis

This chapter reviews the analysis of the results that are gathered through questionnaires. Descriptive analysis, scale measurement and inferential analysis are carried out with Statistical Package of the Social Science (SPSS) program.

Chapter 5: Discussion and Conclusion

This chapter sums up all previous chapters and provides suggestions on future research. The details that are discussed in this chapter are the summary of statistical analyses, discussions of major findings, implication for managerial, limitations of the research and the recommendations for future research.

1.8 Conclusion

All in all, the chapter review provides an overall idea of the research project. This includes the setting of the research, problem statement, the objectives of the research, research questions, hypotheses and the significance of the research project. The layout for each chapter is also briefly mentioned in this chapter. The following chapter will be discussing the literature review of the variables of the research project.

CHAPTER 2: LITERATURE REVIEW

2.0 Introduction

This chapter explains the literature review of the determinants of audiences' gratification in digital billboards which are digitalization, informativeness, irritation, and credibility based on the Technology Acceptance Model. Each of the variables will be explained further in this chapter. The purpose of literature review is to identify the rationale of the research and to provide a complete understanding about the research project (Mertens, 2010).

2.1 Review of Literature

2.1.1 Technology Acceptance Model

Past studies have studied and investigated the elements of Technology Acceptance Model (TAM) and have proposed frameworks of the model (Abdul, Thongapani & Auh, 2014 as cited in Ajzen, 1991; Davis, Bagozzi & Warshaw, 1989). TAM is used to predict the technology acceptance among potential users and decision makers and have been empirically supported with considerable theoretical studies by researchers (Ajzen, 1991; Wu & Lu, 2013). The TAM was defined by Davis (1989) with the uses of Theory of Reasoned Action (TRA) as a basis to specify the causal link between

two key beliefs about innovative technology, perceived usefulness (PU) and perceived ease of use (PEOU) (FĂDOR, 2014 as cited in Davis, 1989). User's acceptance of a new technology depends on the PU which is the primary function whereby a user believes that using a particular system increases work performance (Abdul, Thongapani & Auh, 2014; FĂDOR, 2014 as cited in Davis, 1989). Additionally, PU leads to PEOU as secondary function in which the user perceives the difficulty or ease of using the particular system. Apart from that, the PU and PEOU are based, in part, on normative and extrinsic motives (Peng, 2012).

According to Du (2012), frameworks that are proposed from TAM model are usually emphasized on technology adoption within the organization (Davis, 1989) and have been used in many general contexts relating to user's usage and acceptance of technology (Davis et al., 1989; Venkatesh, 2000). Likewise, TAM is adopted in a study by Lee &Lan (2010) to investigate the impact of technology acceptance of digital signage. In this research, influential variablesof audience gratification on digital billboards are*digitalization, informativeness, irritation, and credibility*are drawn from the TAM based on past studies.

2.1.1.1 Digitalization of Digital Billboard Advertisement

Rückriem et al. (2011) defined digitalization as a conversion of analog data such as text, voice, pictures into digital format like videos. The digital information can be processed, stored, and transmitted through digital tools, circuits, and networks (Rückriem, Ang-Stein & Erdmann, 2011). Digitalization of billboards acts as a cutting-edge technology with innovative features that enable banks to market themselves more effectively and dynamically (Lind, 2008). In this study, it is applicable to various companies apart from banks. Lind described the digitalization of billboards advertising to be flexible and fluid in terms of high reach and frequency of

audiences, able to provide 24-hour consumer engagement, portrays powerful creative messages and interactivity, routine scheduling and guaranteed message delivery, regularly updates creative advertisements according to seasons, price or promotions, and immediate updates via dynamic content feeds (Lind, 2008; Outdoor Advertising Association of America, Inc. (oaaa), 2011).

The terms *Digitalization* and *Entertainment* are interchangeably used as digitalization is an extension of entertainment and exciting media among media users according to Adetunji & Yazam (2012) and Luo (2002) (as cited in Eighmey and McCord, 1998; Eighmey, 1997). Adetunji & Yazam (2012) also stated that the operationalization of digitalization from the theoretical stand of entertainment (as cited in Stem &Zaichokwsky, 1991; Yoo, 2011; and Smock et al., 2011) is applied to befit the digital billboard's media genre.

Moving on, digitalization provides more functional vivid indoor and outdoor advertisements like audio and motion displays to deliver products or services information to audiences with high-quality resolutions (Tullamn, 2004). Since the digitalization of billboard advertising, timely digital contents are remotely controlled through the centralized system via the Internet platform (Raymond, 2005). Digitalization of billboard advertising has the ability to provide diversity and variability features to audiences with the convenience of resetting or changing the contents of the advertisements according to the market conditions (Wilson, 2004; Lind, 2008).

Wilson (2004) explained that the attractiveness of digital billboard advertisements is a basis of digitalization and acts as a dynamic multimedia presentation which is able to attract audiences' attention and trigger the desire to make purchase immediately. An article written by Copley (2012) stated that digital billboards are able to project unlimited amount of images in a short period of time. Moreover, images and videos shown on digital billboards draw audiences' attentions to the visuals being displayed and determined that the advent of technology affects the efficacy of communicative billboards to reach worldwide whereas, other forms of media are often ignored by audiences.

Over the years, digital billboards have become increasingly acceptable as display technology in the marketplace (as cited in Home Theater News, 2007). Lind (2008) stated that *"digital billboards are the future of outdoor advertising."*

2.1.1.2 Informativeness in Digital Billboard Advertisement

Qimei (1999) has acknowledged that the factor of informativeness is best defined by: informative, intelligent, knowledgeable, resourceful, useful, and helpful based on past studies of print advertisements and TV commercials. According to Luo, 2002 (as cited in Bauer & Greyser, 1968) suggested that advertisements are considered to have the ability to provide audience with information and adequate motivations to accept the ad itself. Ducoffe (1996) adds on that informativeness is the advertising's ability to inform and create awareness among consumers of product alternatives in order for consumers to achieve optimum satisfaction during product or service purchase.Outdoor billboards serve as a platform of communication and dissemination of information, to provoke thoughts and ideas, to raise awareness as well as to display graphical expression effectively (Chien, 2011).

Adetunji & Yazam (2012) explained the transformation stages of billboards advertising from paper poster to plastic prints, to the wide digitalized screen projection and the amount of billboard advertisements did not decline functionally due to the mass communication among audience. Based on Adetunji & Yazam's study (as cited in Outdoor Advertising Association of America, Inc. (oaaa), 2011), the advent of technology enables wide display of advertisements digitally on the latest digitalized and electronic version of billboards with the means of communication. Likewise, digital billboards are capable of delivering dynamic messages to large amount of audiences, providing timely information, news and others that varies on the location of the digital billboard. Thus, Informativeness is conceptualized to measure

the degree of information and the timeliness and promptness of information that the digital billboards display to the audiences (Adetunji & Yazam, 2012).

Generally, there are two kinds of advertisements presented in many advertisement literatures determined by audiences' perspective on advertisements and advertisements exposure, which are brand building and directional advertising (Fernandez, 2000). Brand building advertises products or services and is usually delivered via traditional media such as Newspaper, Radio, TV and others. On the other hand, directional advertising is by assisting potential consumers to realize information that is needed. This happens especially when audience is attracted to the advertisement (Adetunji & Yazam, 2012 (as cited in Fernandez & Rosen, 2000; Lohse & Rosen, 2001). However, differentiating the types of advertisement has been a vague debate among researchers in such that brand building is stringently subject to traditional media whereas, directional advertisement is only for media that is mainly developed to deliver advertising messages. For example, movie list, yellow pages, directories and billboards (Wang, 2002). In the case of digital billboards, it is known as a directional advertising that includes functions of brand building and directional advertising in conveying messages to audiences (Adetunji & Yazam, 2012).

2.1.1.3 Irritation of Digital Billboard Advertisement

One of the six dimensions of individual reactions towards advertising is irritation (Wells, Leavitt & McConville, 1971). Aaker and Bruzzone (1985) defines that an irritating commercial consist of provoking elements, inflict discomfort and temporary impatience to the audiences. In addition, advertisements that shows product with unrealistic and false information as well as advertisements that portray physical discomfort are likely to cause irritation towards the advertisements by viewers.

Ducoffe (1996) stated that advertisements that may offend, annoy and insult the audiences are likely to be classified as irritation to audiences. Besides, majority of the advertisements do not necessarily relate to the audiences' needs and this could cause a sense of negative perception towards advertisements among the audiences. Moreover, advertisements that are being forced upon the audiences could cause confusiondistraction, obstruction and discomfort in order to grab attention can be classified as intrusion which is the main input for irritation (Ducoffe, 1996; Li, Edwards & Lee, 2002; Zhang, 2000). Stewart and Pavlou (2002) also concluded that the audiences can be confused, irritated and overwhelmed by excessive advertisements.

Li, Edwards and Lee (2002) stated that the advertisements could irritate the audiences when the ads target wrong audiences, have manipulative messages or repetition of advertisement in a certain period of timeframe. In addition, the advertisement itself also can be a form of irritation as advertisement is classified as a form of noise in communication that could cause irritation to environment (Speck and Elliott, 1997). Similarly, it is also proven that irritation of an advertisement can decrease the overall effectiveness of the advertisement (Aaker and Bruzzone, 1985).

Besides, irritation of advertisement can also be determined by the degree of the advertisement design and appearance which appear to be messy and irritating that causes discomfortto the audiences (Luo, 2002). However, Chien (2011) explained that any type of advertisement that is transmitted through outdoor billboard can be considered as annoyance towards natural scenic views which can cause irritation to the audiences. Besides, Alwitt and Prabhaker (1992) stated that some advertisements are beneficial to certain audiences and yet irritating and not worthwhile to others.

2.1.1.4 Credibility of Digital Billboard Advertisement

Advertising credibility can be defined as 'the extent to which the consumer perceives claims made about the brand in the advertisement to be truthful and believable' (Mackenzie & Lutz, 1989). Mackenzie & Lutz (1989) further explained about advertising credibility subsystem which includes perceived advertisement claim discrepancy, advertiser trustworthiness and advertisement credibility are used to determine the credibility of an advertisement.

Conversely, Varey (2002) defined advertiser credibility as the level of audience perceives a company to have credible source of information in which the company's reputation could affect its advertiser trustworthiness (Jarvenpa and Tractinsky, 1999). Likewise, credibility in an advertisement is affected by different elements, such as company's credibility and bearer of the message (Goldsmith, Lafferty and Newell, 2000).

Besides, celebrities also play an important role in enhancing the credibility of an advertisement as mentioned by Goldsmith et al. (2000) and the audiences perceived that celebrities as reliable sources of information about the product or company they endorse. Celebrities credibility is determined by source-credibility model which the effectiveness of advertisement is depend on the perceived level of expertise and trustworthiness related to the endorser (Erdogan. 1999).

Pavlou and Stewart (2000) define advertising credibility as 'predictability and fulfillment of implicit and explicit requirements of an agreement'. Ducoffe (1996) believed that attitude towards advertisement is related to the audiences' attitude towards the advertisement characteristics and audiences' perceived value of the advertisement. Bauer & Greyser (1968) concluded that advertisement which is placed on newspaper is perceived to be more credible, reliable and informative compare to television. Haghirian et al. (2005) stated that an advertisement that has higher credibility will likely to have higher value which could bring higher impact to the audiences.Apart from that, advertisement credibility is determined by the

advertisement content that portrays important timely information (Balasubramanian et al., 2002).

2.1.2 Audiences' gratification based on Uses and Gratification theory

Uses and Gratification theory (U&G) was originally developed by Herta Herzog in 1944 to determine the purposiveness and attentiveness in media consumption (Adetunji & Yazam, 2012). U&G theory have been widely used in the marketing literature with the means of accessing individual behavior related to the technology adoption and usage (Peng, 2012). Sundar & Limperos (2013) explained that gratifications are conceptualized as "need satisfactions," which exist when particular media source is able to provide needs for the individual that match with his/her expectations rather than on specific features of the media (as cited in Katz, Blumler & Gurevitch, 1974; Haridakis, 2002).

The assumption of U&G theory is that audiences are goal-directed in terms of individual behavior, and are known as active media users. Similarly, the audiences are conscious of the needs and choose the favorable media for attention to satisfy their communication wants (Katz, Blumler & Gurevitch, 1974; Adetunji & Yazam, 2012).

Adetunji & Yazam (2012) reported that U&G acts as a functionalist theory which can be applied to articulate audience satisfaction and gratification report towards mass media (as cited in Eighmey & McCord, 1998; Katz, Blumler & Gurevitch 1974). Peng (2012) added that factors related to an individual's choice of the new media can be explained directly from the U&G model (as cited in Stafford et al., 2004). Likewise, factors range from utilitarian (functional) to non-utilarian such as enjoyment, entertainment, and social status. In addition, studies related to media

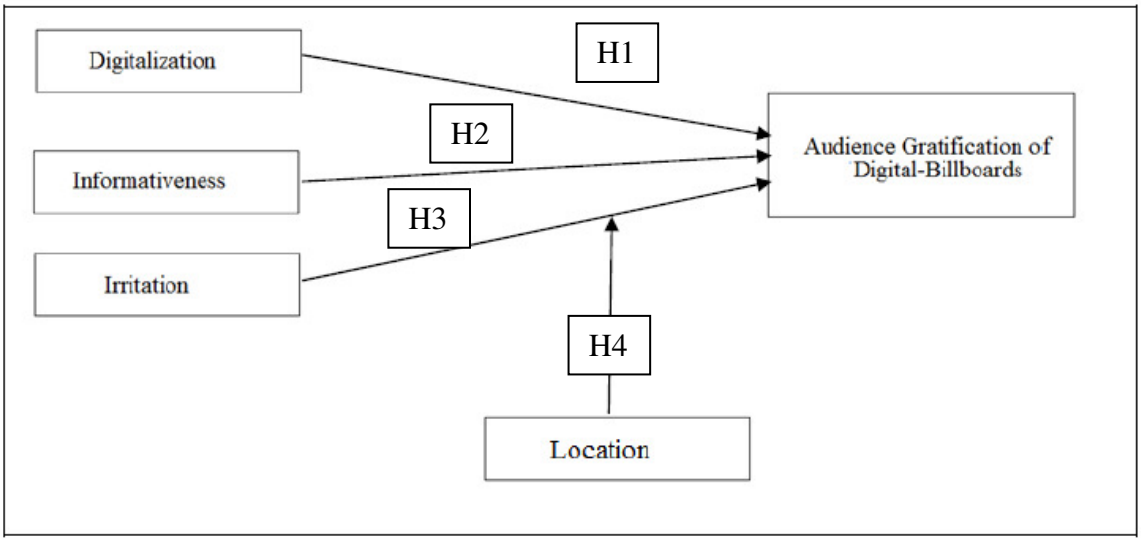
technology that uses U&G theoretical perspective often apply and test dimensions namely entertainment, informativeness, and irritations (Adetunji & Yazam, 2012 as cited in Luo 2002).

Quantitative research using the U&G theory traditionally has to fulfill what, where, and how audience adapt, consume and use mass media. These can be determined by demographics, usage patterns, rating scales of needs, motivation and satisfaction level (McQuail, 2001).

Based on a research done by Adtunji & Yazam (2012), relevant components chosen in the research are digitalization, informativeness, irritation, and location that influence the gratification of audiences towards digital billboard with the adoption of U&G theory. Therefore, this study proposes four components namely digitalization, informativeness, irritation, and credibility to assess the causal effect and relationship of consumers' gratification towards digital billboards.

2.2 Review of Relevant Theoretical Models

Figure 2.1: Theoretical Model of Assessing Audiences' Satisfaction of Advertising Digital-Billboard: A U&G Theoretical Perspective (Adetunji & Yazam, 2012).

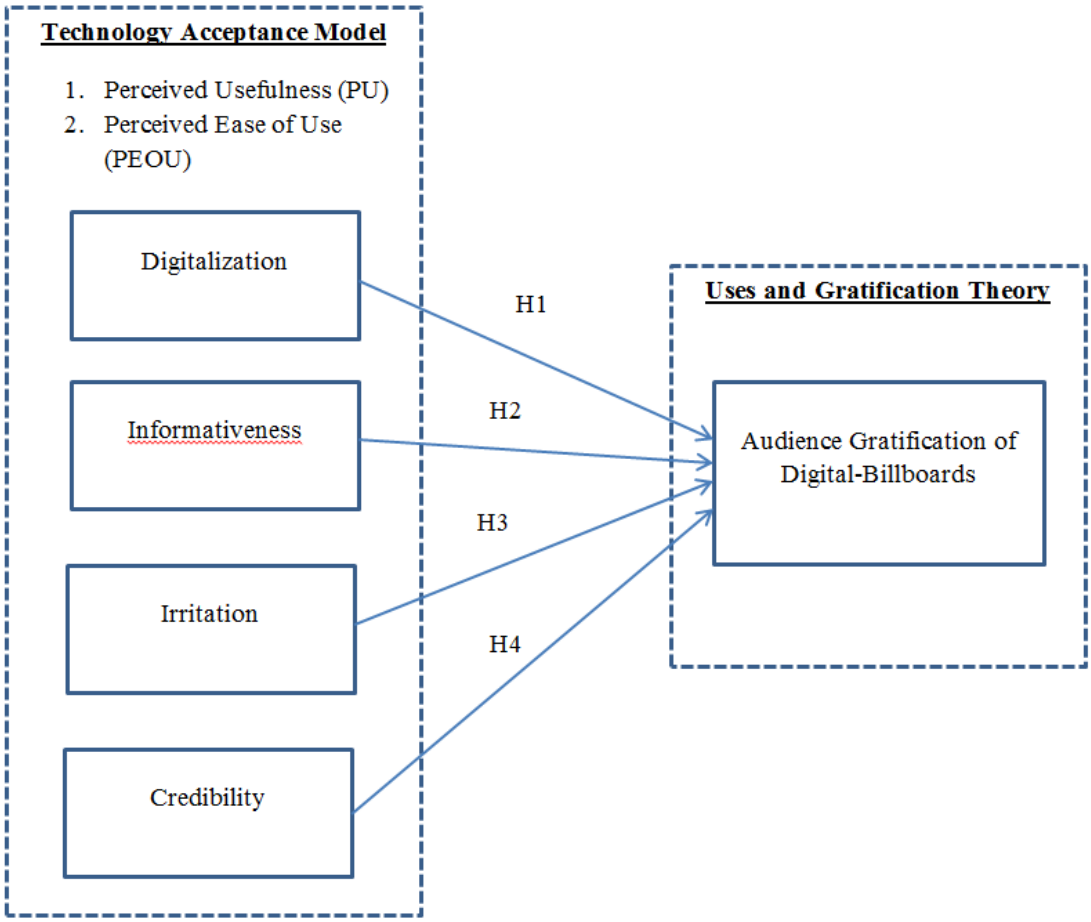


The above model assesses the audiences' satisfaction of advertising digital-billboard in Malaysia, specifically with the target samples of students from Northern University of Malaysia (UUM). The model is developed to determine the variables that influence audiences' gratification towards digital-billboards.

There are four independent variables in this model: Digitalization, Informativeness, Irritation, and Location (as a mediator between Irritation and Audience Gratification of Digital-Billboards). Digitalization and Informativeness aids audience satisfaction, without digital billboards could affect the degree of gratification among audience. Irritation does not affect audiences' gratification as revealed in the study. However, Location does influence the audience gratification of digital billboard.

2.3 Proposed Theoretical/ Conceptual Framework

Figure 2.2: Proposed Conceptual Framework for Determinants of Digital Billboards that Influences Audience's Attitude



Source: Developed for research

The model above shows the projected conceptual framework as the foundation for this research study. In this framework consists of independent and dependent variables. Independent variables that include digitalization, informativeness, irritation, and credibility can influence the dependent variable which is audience gratification of digital billboards.

2.4 Hypothesis Development

2.4.1 Relationship between digitalization and audience gratification on outdoor digital advertising.

The term Digitalization and Entertainment are used interchangeably. User and gratification theorists (U&G theory) revealed that the value of digitalization entertainment lies in its ability to satisfy users' needs for escapism, hedonistic pleasure, aesthetic enjoyment, and/ or emotional relief (Adetunji & Yazam, 2012 as cited in McQuail, 2001). Similarly, the U&G theory is adopted in studies to access the variables influencing audiences' attitude (Qimei & Wells, 1999; MacMillan, 2000; Luo, 2002). However, Michael (2011) argued that past studies found that the types of billboard advertising does not relate to audiences' attitude as audiences are being exposed to outdoor digital billboard advertisements spontaneously. In other words, audiences do not have the choice to avoid the advertisements displayed by digital billboards.

Besides, research based in United States regarding the assessment of digital billboards is attractive to branding of products, return on investment, and audience exposure (Adetunji & Yazam, 2012 as cited in Gerba, 2004). Due to the effectiveness of outdoor digital billboards in the United States, there are laws on road safety that prohibit the implementation of digital billboards in some areas. Likewise, the animation features draws driver's attention and that leads to unsafe driving on the road.

In Malaysian context, it is reported that Malaysians are satisfied of richer and higher interactive features provided by digital billboards particularly in crowded cities such as Kuala Lumpur and Penang. Furthermore, Malaysians found digital billboards advertisements to be interesting (53%), attractive (63%), and unique (58%) based on

a research presented by Malaysian Communication and Multimedia Commission (SKMM) (2009).

A study revealed that the more entertaining or digitalized media are, the more the audiences are attracted to as compared to media that is less digitalized. Therefore, audiences' gratification on media channels is influenced by the entertainment provided by the media (Stem & Zaichowsky, 1991).

The hypothesis is forwarded as:

H1: There is a significant relationship between digitalization and audience gratification on outdoor digital advertising.

2.4.2 Relationship between informativeness and audience gratification on outdoor digital advertising.

Advertisements are less noticed or processed by the audience due to the competitive distraction of advertisements and advertisements medium that targets potential audiences frequently (Borgart, 1985). Similarly, Interrupted attention, lack of time, and lack of creativity are constraints that lead advertisements to be less valued and less informative that is ineffective (Adetunji & Yazam, 2012). The constraints stated are however insufficient to undermine the informativeness of advertisements and ads media informativeness (Wang, 2002). Furthermore, Ducoffe (1996) mentioned that the advertisement messages are forced on audiences irrelevantly which audiences shop for products or services after being exposed to product details from the advertisement.

The basis of advertisement consumer' response involves familiarity, empathy or satisfaction, entertainment, brand reinforcement, irritation, and informativeness

according to research by Plummer (1971). Past studies has shown that informative advertising is favorable to consumers (Abernethy & Franke 1996; Ducoffe, 1995) and that information is processed more extensively (Kendzierski, 1980; Kenna & Baillet, 1980) than non-relevant information.

A survey conductedby Bauer & Greyer (1968) found that majority consumers reported that information provided by the advertisement is the main reason in approving the advertisement. Nonetheless, Advertisement messages delivered via television is considered less informative as compared to advertisements from newspaper argued Bauer & Greyer (1968) and Larkin (1978). This is because newspaper is viewed as more reliable, credible, and informative stated in a study.

Based on significant findings of a research by Outdoor Advertising Association of America, Inc. (oaaa) in 2009, found that audiences gain a lot of knowledge from billboard advertisement with the ability to recall a wide range of actionable information collected from shops and restaurants they later visited, radio and TV programs that interest them, events that they desire to attend, or something funny that they shared with friends later during the day.

Thus, there is significance in relationship between advertisement values, audience attitude to advertising and informativeness of the advertisements empirically found and supported in a study by Ducoffe (1995). Correspondingly, informativeness identifies the value of ads and acts as an insight of audience attitude.

Thus, the following is hypothesized:

H2: There is a significant relationship between informativeness and audience gratification on outdoor digital advertising.

2.4.3 Relationship between irritation and audience gratification on outdoor digital advertising.

Jessica, Tim, Simon, and Itan (2011) have concluded that digital billboards can cause major distraction towards drivers on road that leads to more driving errorsas a result of reduced concentration and slower responsiveness which can cause higher road accidents. As mentioned by Ducoffe (1996), distraction can happen when the drivers perceived the ads as confusing, annoying and insulting which irritate the audiences.

Chien (2011) mentioned that outdoor advertising is a form of pollution to natural scenic views and advertisement itself is a form of noise as stated by Speck and Elliott (1997) which can cause irritation among the audiences.

As issue raised by Li et al (2002), ads that target wrong audiences, have unscrupulous message and high number of repetition in short time could irritate the audiences and ads that are forced on audiences can be considered as intrusion. In addition, audience is forced to see unwanted ads that may have high repetition when they are driving on the road with many digital billboards that have been set up on the roadsides and flyover. Consequently, audiences will have negative feeling and feeling unsatisfied towards the advertisements (Rettie, Robinson & Jenner,2001; Zhang, 2000; Alwitt & Prabhaker, 1994).

From audiences' viewpoint, advertisement that have unnecessary graphic and noises can deem to be irritating and the audiences perceive the advertisement negatively (Ducoffe, 1996). Luo (2002) stated that audiences avoid advertisements that bring discomfort and unpleasantness. Otherwise, when the audiences see digital billboards involuntarily that are not up to their liking and acceptability, they will get irritated and hence reject the advertisements that are shown in the digital billboards.

However, advertising irritation may not necessarily bring negative outcomes toward advertisements. Based on Demirdjian and Brungs (1984) research on perceive irritation on advertising, found out that advertisements that are irritating are able to

create brand awareness and influence higher advertisement recall among audiences as compare to non-irritate advertisements. This suggests that the advertising on digital billboards do not necessarily bring a degree of irritation that is capable of affecting the audiences' perception towards the ads negatively.

Therefore, the following is hypothesized:

H3: There is a negative significant relationship between irritation and audience gratification on outdoor digital advertising.

2.4.4 Relationship between credibility and audience gratification on outdoor digital advertising.

Watt (2014) stated that outdoor advertising have its credibility as there are many companies employed outdoor advertising have spent a total of 5.6 billion dollar in year 2006 according to Outdoor Advertising Association of America. In other words, the advertisements that can be seen by audiences are as credible as other medium such as newspaper and television. The drivers are able to get the intended messages that are being portrayed by the advertisers.

Besides, study shows that the drivers in the United States perceive the advertisements on outdoor advertising have high level of advertiser trustworthiness and advertising credibility with credible sources of information (Varey, 2002) and timely information (Balasubramanian et al., 2002) displayed. Moreover, audiences are positively influenced by the credibility of advertisements (Hagirian et al., 2005). Hence, audiences have positive feelings towards advertisements displayed on outdoor digital billboards.

Furthermore, outdoor advertising that uses picture of celebrities can also increase the advertisements' credibility. As stated by Goldsmith et al. (2000), the celebrities can boost up the confidence of the audiences towards the advertisement and the audiences perceived the celebrities as reliable sources of information. By using celebrities' pictures on outdoor advertising, the advertisements will have higher credibility towards the audiences.

On the contrary, there are critics mentioned that advertising nowadays do not have the necessary credibility such as the reliability, meaningfulness and usefulness of the advertisements and most of the advertisers do not convey the accurate information to the audiences (Bachman, 2013). This indicates that advertising on digital billboards may not have the credibility that audiences seek for.

Hence, the following is hypothesized:

H4: There is a significant relationship between credibility and audience gratification on outdoor digital advertising.

2.5 Conclusion

In this chapter, we discuss the independent variables (digitalization, informativeness, irritation, and credibility), and dependent variable (audiences' gratification). Moreover, we also identified and developed four hypotheses in this chapter. The following chapter will discuss the methodology that we will use in our research.

Chapter 3: Methodology

3.0 Introduction

In this chapter, it will explain the methods used in the research project which is collecting data and information for analyzing and evaluation of the hypothesis and research questions. The methods will be explain are research design, data collection, sampling design, constructs management, research instrument which includes the pilot test, followed by data processing and data analysis. The objective of this chapter is to present a clear understanding towards the evaluation of the results with appropriate procedures applied.

3.1 Research Design

Research is an enquiry, finding and brings out something which was formerly unidentified, unclear or required in testing the credibility of current information, according to Finn, et al. (2000). A study of a process requires an appropriate technique of information selection, analysis and research. Quantitative research was conducted in this study to identify which variables will influence audience attitude towards the usage of outdoor digital advertising.

Descriptive research design was also use in this study. According to Devin Kowalczyk, is a study designed to depict the participants in an accurate way. Simpler way, it is about describing the people to take part in the studies. There are 3 ways a researcher can conduct descriptive research project which is observational, a method

of viewing and recording participants, case study, an in-depth study of an individual or group of individuals and lastly survey, brief interview or discussion with an individual about a specific topic.

Cross-sectional research is a research method frequently used in developmental psychology. It is also utilized in others areas such as social science and education. Studies utilizes different groups of people who differ in variable of interest, but share other same or similar characteristics such as educational background, socioeconomic status and ethnicity (Kendra Cherry, 2013)

3.2 Data Collection Methods

Data collection is a systematic process of gathering data and information from a targeted variety of sources which then researcher analyzes the data to form statements which answers research problems. In this particular research, data was collected through distributing survey questionnaires in the Kuala Lumpur outdoor digital advertising audiences. Data collected are used to answer the hypotheses and research problems. There are two types of data collection method, primary and secondary data.

3.2.1 Primary data collection

According to Kynda R. Curtis, primary data are collected precisely to address the problem through questions form which is conducted by the particular researcher. Primary data can be collected through surveys, focus groups or in-depth interviews such as taste test. Primary data collection also gives the advantage of receiving

responses directly on the spot. This method is also easy for coding, investigation and clarification.

In collecting primary data for the research, questionnaire was used. Questionnaire is also a tool which known as an inexpensive way to collect data. Primary data is then gathered and assembled primarily with the research purpose of how outdoor digital advertising influences the audience attitude in the Kuala Lumpur area. Questionnaire is also easy to understand, thus it can avoid difficulty of targeted respondents to understand as well. This is because the targeted audiences are the public pedestrians in Malaysia walking around the cities where digital billboards are around them.

3.2.2 Secondary Data Collection

Is data that have been collected and recorded by someone else or specifically known as researchers and readily from other source (Tran Thi Ut, 2013). Secondary data also gives relevant information to support particular linked research. It is also less expensive, cheaper and less time consuming. Secondary data can be found through journals, libraries and also relevant articles.

3.3 Sampling Design

3.3.1 Target Population

A target population must be prudently defined so that appropriate sources which the data collected can be recognized to provide accurate answer for the research

(Zikmund el al, 2013). The target population in this research project is the public pedestrians walking around cities in Kuala Lumpur, where most of the digital billboards are placed in the pedestrian's path way and also lamp poles by the dividers.

3.3.2 Sampling Frame and Sampling Location

Location where most outdoor digital billboard placed Kuala Lumpur is the walkway from Pavilion Mall to Lot 10 to Plaza Low Yat to Bukit Bintang and lastly to Times Square. Also at Kuala Lumpur Conventon Centre (KLCC) or known as Kuala Lumpur Twin Tower to Avenue K which is located opposite KLCC. These places are all walking distance to each other where many digital billboards are placed along the walkway, dividers and also lamp poles. Thus, Kuala Lumpur will be the most suitable region to collect data related to outdoor digital billboard. Surveys are delivered through hard copy face to face with the pedestrians.

3.3.3 Sampling Elements

Sampling elements respondents in this research project must be pedestrians walking along the target walkway. This is because the pedestrians there are encounter the most digital billboard as the targeted area are areas where most digital billboard are placed. Thus, pedestrians there are the most suitable respondents to complete this research project.

3.3.4 Sampling Techniques

Sampling techniques used in this research project is non-probability sampling techniques. Non-probability samples are chosen without following mathematical guidelines (Dr. Brad Warren, 2011). It is used because we couldn't obtain whole sampling frame in the study. The type of non-probability techniques used is convenience sampling. This technique gives researchers a more convenient way of measuring the data and also it's easier to conduct due to time constraints.

3.3.5 Sampling Size

The sample size in this research project is set to be 260 respondents. Thus, 260 copies of questionnaires are delivered to pedestrians in the targeted Kuala Lumpur areas and some are conducted online towards respondents that are set to be qualified. Therefore, Statistical Package for Society Science (SPSS) version 20.0 will be use to analyze the data of the respondents.

3.4 Research Instrument

Based on the literature review done in Chapter 2, self-administered questionnaire are formed to collect primary data from the audience. Questionnaire is then delivered and conducted face to face with respondents and the questionnaire will be collected back on the spot to boost respondent's involvement.

3.4.1 Questionnaire Design

Questionnaire is written in asingle language which is English. English is a more universal, appropriate and easy language to communicate with the whole respondents.

The cover page of the questionnaire briefly introduces the purpose of the research to give respondents a rough thought of scope to answer the questionnaire. 260 of questionnaires were delivered to the respective Kuala Lumpur pedestrians. The questionnaire is separated into 3 sections. Which is Section A, B and C.

Section A is about the respondents view and perception in rating towards hypothesis tested. There are five variables which are digitalization, informative, irritation, credibility and satisfaction. All the variables are measured using likert-scale of measurement.

Section B is about the general knowledge of the people perception towards digital billboards.

Section C is about the respondent's basic demographic characteristics. This allows the researchers to capture general information about the respondents and also help to understand the respondents more specifically.

3.4.2 Pilot Test

Before conducting the survey questionnaires to the 260 audiences, a pilot test was conducted to ensure the rational of the questionnaire. According to (Van Teijlingen and Hundley, 2011), pilot test is conducted to filter the rationale of the questionnaire to avoid errors in the questionnaire and also to ensure all the questions are understandable by the respondents. A pilot test also helps researcher identifies potential problems such as questionnaire too complicated or ambiguous towards the respondents.

3.5 Constructs Measurement

The scale of measurement is a crucial tool which influences the statistical procedures that are used in analyzing the data. There are four types of measuring scales which are nominal, ordinal, interval and also ratio. In the particular research project, only nominal, interval and ordinal scales are adopted in designing the questionnaire.

3.5.1 Nominal Scale

Nominal scale is at the other end of the structure. They do not even need the task of mathematical values, but only of exclusive identifiers (numerals, characters, colors). They are invariant under any modification that maintains the connection between people and their identifiers. Thus it is allowable to execute almost any function on the provided that researchers do not combine or mix up details. When the details principles are numeric, these features consist of any features that map one-to-one from the exclusive set of figures into a new set. When the details principles are not number, permissible features consist of putting in order the details values. Besides, only the most fragile type of details can endure such irrelevant changes (Paul F. Velleman & Wilkinson, 1993).

3.5.2 Interval Scale

Interval scale is a set of range that consists of nominal and ordinal qualities, besides that, it catches details about variations in amounts, or range of an idea from one issues to the next (Zikmund et al., 2010). Interval scale uses variety for calculate the factors,

so the range between the figures are always equivalent (Hair et al., 2007). Period scale not only shows purchase, but it helps to evaluate the range between any two points on the range. It allows scientists to estimate indicates and the standard diversions of the reactions on the factors. The researchers implied the interval range where it is used by various scientists to gauge concepts such as views, behavior, and emotions (Hair et al., 2007). Correlative with interval range, scientists usually evaluate and calculate the outcomes depending on Likert scale. In common, there are 5 groups of responses comprised with this range from (5) = strongly agree, (4) = agree, (3) = neutral, (2) = disagree and (1) = strongly disagree.

3.5.3 Ordinal Scale

Ordinal scale measurement is measured through ranking-order (Stevens, 1946). Ordinal scale is used when categorize the information based on a specific order or rank. Example usage of ordinal scale is the monthly expenses on foods, which is divided as below RM50, RM50 to RM100, RM100 to RM150, RM150 and above.

3.6 Data Processing

Data processing refers to information and data collected for a research which is being process through checking, editing, coding, transcribing and cleaning. The purpose of data processing is to filter out irrelevant information to improve quality of the data and precise the results.

3.6.1 Data Checking

Data checking is a very crucial procedure to detect errors in the data. Pilot test was carried out to ensure the questionnaire is understandable and relevant. Also, once questionnaire is collected back from the respondents, researchers must check the data to ensure the data collected is clear and understandable for the researcher to analyze and process the data.

3.6.2 Data Editing

Data editing is a process of investigating the data collected in questionnaires to detect errors and increase precision of data (MBA Knowledge Base). According to Mildred B. Parten (1959), data must be accurate, consistent with secured facts, uniformly entered and accepted for tabulation. This is to warrant the data collected are consistent. Researchers then correct the data collected if there is data error occurred such as incomplete and ambiguous answers collected from the respondents. Example, two answers was given in a single question, researcher then choose one of the answer only.

3.6.3 Data Coding

The next procedure of data processing is data coding which refers data converted into numbers so it can easily key into computer software for analysis purpose (Lewis, Bryman & Liao, 2004). Researchers converted the data collected into number. In

current research, the answer from strongly disagree to strongly agree is indicated by number one to number five.

3.6.4 Data Transcribing

Malhotra and Peterson (2006) stated that data transcribing refers as key in the coded data into computers. The coded data collected from questionnaire was transcribed into SPSS software version 20.0 by researchers.

3.6.5 Data Cleaning

Data cleaning is the last procedure of data processing which refers as cleaning data for consistencies. Inconsistencies data may come from extreme values and faulty logic (Malhotra & Peterson, 2006). Researchers correct some inconsistencies data that came from extreme values and faulty logic.

3.7 Data Analysis

In this study, simple and advance data analysis will be used to interpret the data. For simple analysis, it will calculate frequency distribution, the mean, percentage

distribution, and so forth. For advance analysis, it will be Multiple Regression Analysis and Pearson Correlation Coefficient. Besides, in current research Statistical Package for the Social Sciences (SPSS) version 20.0 software will assist the researches to analyze quantitative data effectively.

3.7.1 Descriptive Analysis

Descriptive statistics is used to help researchers to study the data by describe and summarize the basic data that have been collected from the respondent (McLellan et al., 2003). Besides, descriptive statistic is very useful for researchers to gain a general picture of the respondent demographic data. Moreover, descriptive statistic is most suitable method to use when the objective is to describe and discuss data more generally and conveniently. In this way, descriptive statistic helps the researchers to simplify numerous data in a sensible way. In current research, data that are suitable for descriptive statistic are age, income, and so forth.

3.7.2 Scale Measurement

This tool is to measure the reliability of the data to gain an appropriate result for the research project. The test is known as reliability test. According to Oxford Dictionary, reliability refers to the consistently stable and good in quality and performance results.

3.7.2.1 Reliability Test

Reliability analysis is used to examining the consistency and stability of variable (Sekaran & Bougie, 2010). Moreover, it is useful when independent variables are used to predict the outcome. Consistency indicates how well the variables are being measured within a group of data. In current research, Cronbach's alpha index is used to evaluate the reliability in term of internal consistency measurement. The reliability result of the test will be interpreted in Cronbach's Alpha value. Subsequently, alpha coefficient values will be compared with the rules of thumb. Whereas, the rule of thumb for Cronbach's Alpha, "$\alpha \geq 0.9$ –Excellent", "$0.7 \leq \alpha < 0.9$ – Good", "$0.6 \leq \alpha < 0.7$ – Acceptable", "$0.5 \leq \alpha < 0.6$ – Poor", and "$\alpha < 0.5$ – Unacceptable". A cut off points above than 0.6 shows the result is reliable. Cronbach's Alpha can be considered as an adequate index for consistency and reliability of the independent and dependent variables (Zikmund, 2003).

3.7.3 Inferential Analysis

Inferential analysis is used to study the probability of differences between the observed data and actual data that might happen by chance in this study (Malhotra, 2006). Besides, inferential analysis is used to make inference about the characteristics of a population based on sample data. In current study, Multiple Regression Analysis and Pearson's Correlation Coefficient are used.

3.7.3.1 Pearson Correlation Coefficient Test

Pearson Correlation Coefficient is a technique used to evaluate the strength of the linear relationship between the variables. Besides, it shows the direction strength of significant and association between the relationship among all variables. Pearson's correlation value could range between 1.00 and 0.00. Value 1.00 means perfect correlation while value 0.00 means no correlation (Frederick & Larry, 2009). For example, confidence level of 95 percentages is assigned. If p-value is less than 0.05, H1 will be accepted. Vice versa, Ho is rejected when P value <0.05.

Table 3.1: Rules of Thumb about Correlation Coefficient

Coefficient Range	Strength of Association
± 0.00 to ±0.20	Slight, almost negligible
± 0.21 to ±0.40	Small but definite relationship
± 0.41 to ± 0.70	Moderate
± 0.71 to ± 0.90	High
± 0.91 to ± 1.00	Very Strong

Source: Hair, J., Money, A., Samouel, P., & Page, M. (2007).

3.7.3.2 Multiple Regression Analysis

Multiple regression analysis is used to find out how outdoor digital advertising influences audience attitude's among Kuala Lumpur pedestrians. Furthermore, multiple regression analysis also uses to measures the degree of influence of the

independent variables on a dependent variable and forecast a single dependent variable (Zikmund, 2003). The result of multiple regression analysis will determine whether the impact between the variables is positive or negative to the independent variables. From the impact, researches will justify based on the result obtain from the multiple regression analysis.

3.8 Conclusion

This chapter is all about the methodologies which are going to be use in the research project. Questionnaire are distributed and conducted is reflected as primary data and journals, books and internet is known as secondary data. The SPSS software is then used to analyze the collected data to test the variables reliability and others results which discussed earlier. Therefore, the next chapter contains the results of the research project for us to have a better understanding towards the data analysis.

CHAPTER 4: DATA ANALYSIS

4.0 Introduction

There are three sections in this chapter. Firstly, the descriptive analyses to be analyze including the central tendency measurement of construct. Secondly the scale measurement with purpose of determining the reliability of all the variables tested which includes the pilot test. Lastly, is the inferential analysis which includes the Pearson's correlation analysis, Anova and multiple regression analysis.

4.1 Descriptive Analysis

This section will describe on respondents' demographic profile and central tendencies will be analyzed.

4.1.1 Respondent Demographic Profile

Figure 4.1: Gender

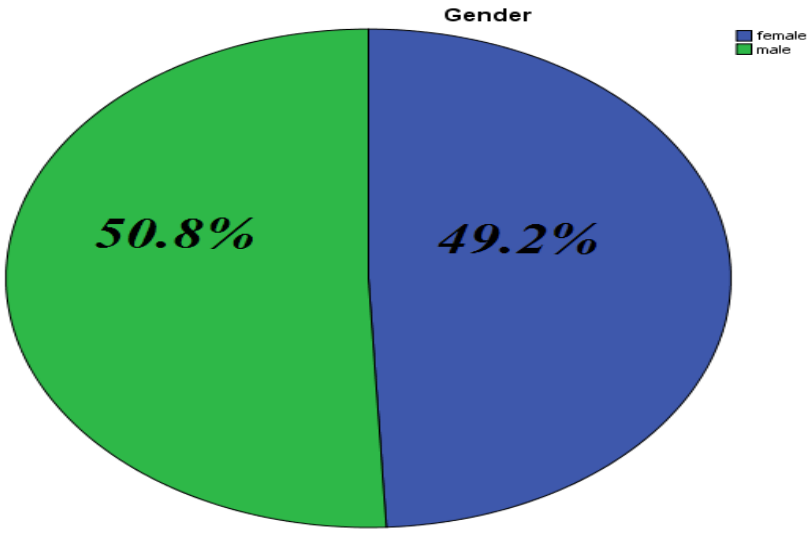


Table 4.1: Gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	129	50.8	50.8	100.0
	Female	125	49.2	49.2	49.2
	Total	254	100.0	100.0	

Above Table 4.1, it shows the gender of respondents. Out of 254 respondents, 50.8% of the respondents are male while 49.2% of the respondents are female.

Figure 4.2: Age

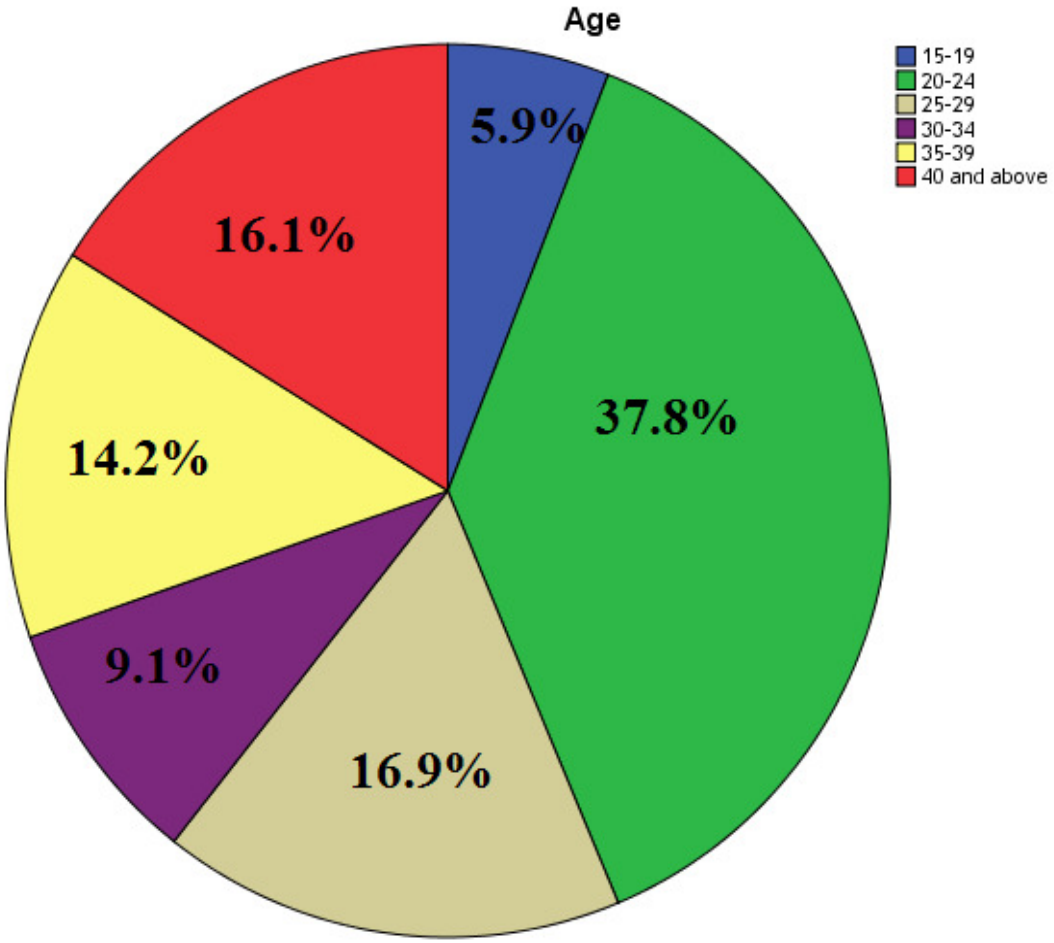


Table 4.2: Age

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	15-19	15	5.9	5.9	5.9
	20-24	96	37.8	37.8	43.7
	25-29	43	16.9	16.9	60.6
	30-34	23	9.1	9.1	69.7
	35-39	36	14.2	14.2	83.9
	40 and above	41	16.1	16.1	100.0
	Total	254	100.0	100.0	

According to the above Table 4.2, from age 15 to 19, the respondents weighing 5.9%, age 20 to 24 is 37.8%, age 25 to 29 is 16.9%, age 30 to 34 is 9.1%, age 35 to 39 is 14.2% and lastly, 40 and above is 16.1%.

Figure 4.3: Races

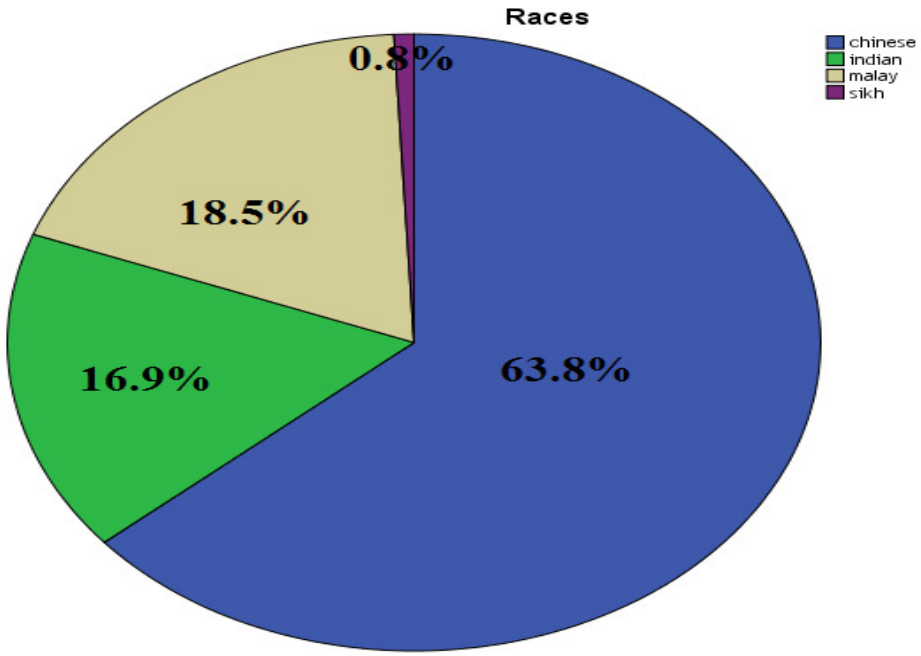


Table 4.3: Race

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Malay	47	18.5	18.5	18.5
	Chinese	162	63.8	63.8	82.3
	Indian	43	16.9	16.9	99.2
	Sikh	2	.8	.8	100.0
	Total	254	100.0	100.0	

According to the Table 4.3 above, majority of the respondents are Chinese with 63.8%, followed by Malay with 18.5%, Indian 16.9 and lastly Sikh 0.2%.

Figure 4.4: Education Level

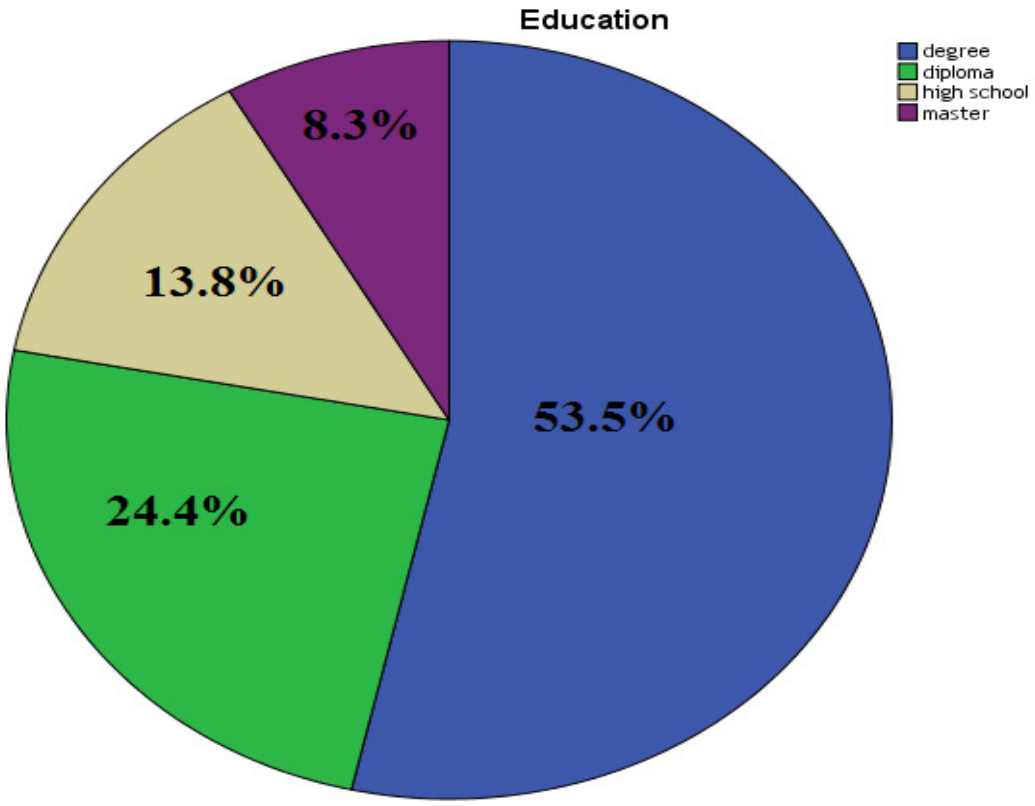


Table 4.4: Education Level

	Frequency	Percent	Valid Percent	Cumulative Percent
Degree	**136**	**53.5**	**53.5**	**53.5**
Diploma	**62**	**24.4**	**24.4**	**78.0**
High School	**35**	**13.8**	**13.8**	**91.7**
Master	**21**	**8.3**	**8.3**	**100.0**
Total	**254**	**100.0**	**100.0**	

According to the above education level education level table 4.4, degree holder is 53.5%, diploma holder is 24.4%, high school graduate is 13.8% and master holder is 8.3%.

Figure 4.5: Employment Status

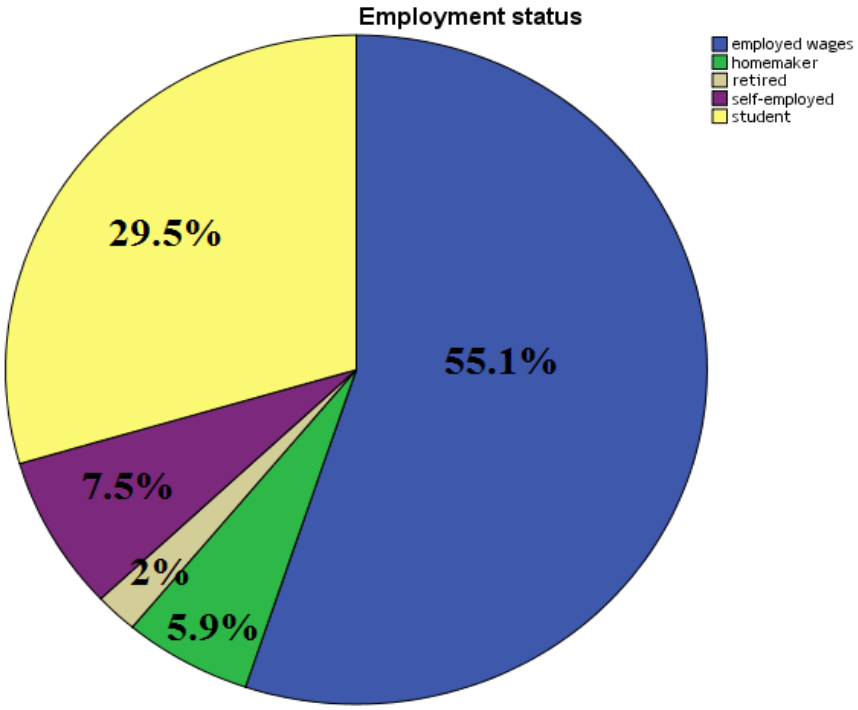


Table 4.5: Employment Status

	Frequency	Percent	Valid Percent	Cumulative Percent
Employed wages	**140**	**55.1**	**55.1**	**55.1**
Homemaker	**15**	**5.9**	**5.9**	**61.0**
Retired	**5**	**2.0**	**2.0**	**63.0**
Self-Employed	**19**	**7.5**	**7.5**	**70.5**
Student	**75**	**29.5**	**29.5**	**100.0**
Total	**254**	**100.0**	**100.0**	

According to the employment table 4.5 above, the employed wages is 55.1%, homemaker is 5.9%, retired is 2%, self-employed is 7.5% and lastly, student is 29.5%.

Figure 4.6: My thoughts while viewing the ad were

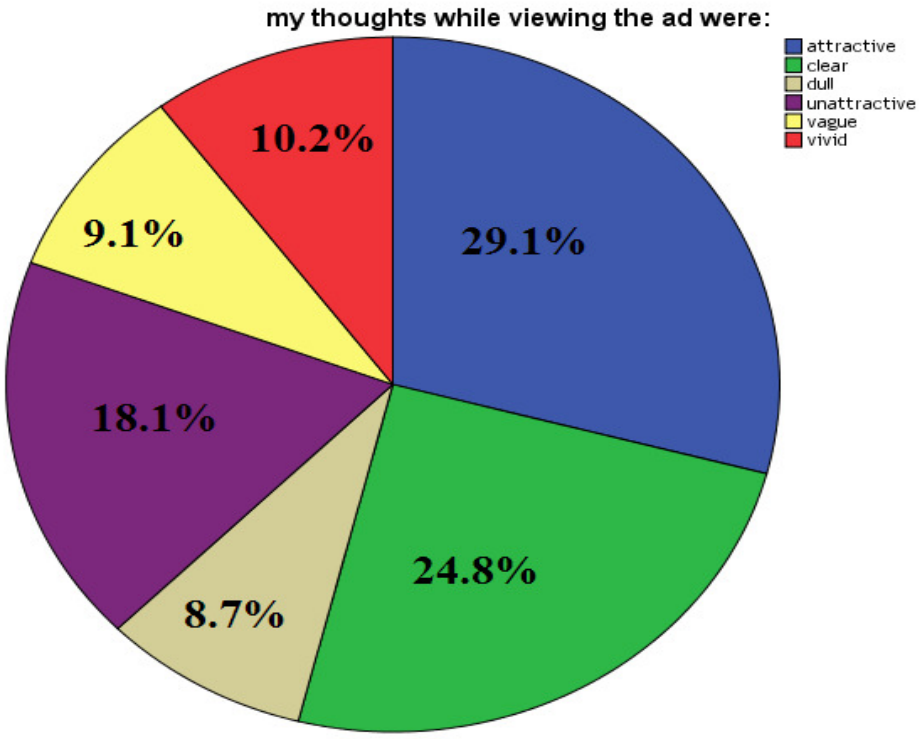


Table 4.6: My thoughts while viewing the ad were

	Frequency	Percent	Valid Percent	Cumulative Percent
Attractive	**74**	**29.1**	**29.1**	**29.1**
Clear	**63**	**24.8**	**24.8**	**53.9**
Dull	**22**	**8.7**	**8.7**	**62.6**
Unattractive	**46**	**18.1**	**18.1**	**80.7**
Vague	**23**	**9.1**	**9.1**	**89.8**
Vivid	**26**	**10.2**	**10.2**	**100.0**
Total	**254**	**100.0**	**100.0**	

According to the table 4.6 above, the respondents thoughts while viewing the ad were attractive is 29.1%, clear is 24.8%, dull is 8.7%, unattractive is 18.1%, vague is 9.1% and lastly vivid is 10.2%.

Figure 4.7: Advertising on outdoor digital billboards

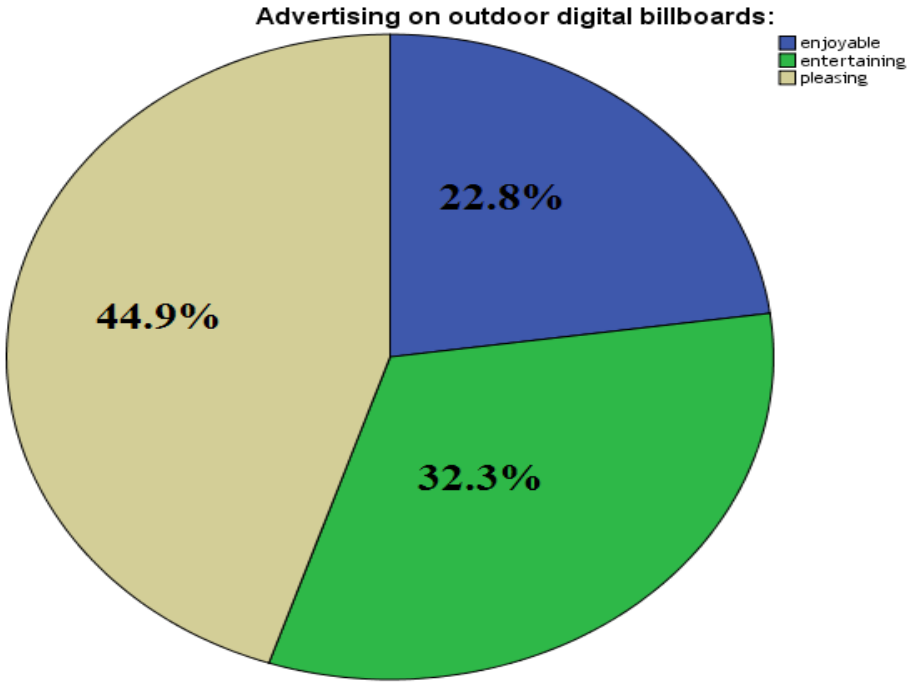


Table 4.7: Advertising on outdoor digital billboard

	Frequency	Percent	Valid Percent	Cumulative percent
Enjoyable	58	22.8	22.8	22.8
Entertaining	82	32.3	32.3	55.1
Pleasing	114	44.9	44.9	100.0
Total	254	100.0	100.0	

The above table 4.7 shows that advertising on outdoor digital billboard is 22.8% enjoyable, 32.3% is entertaining and 44.9% is pleasing.

Figure 4.8: Advertising on outdoor digital billboard

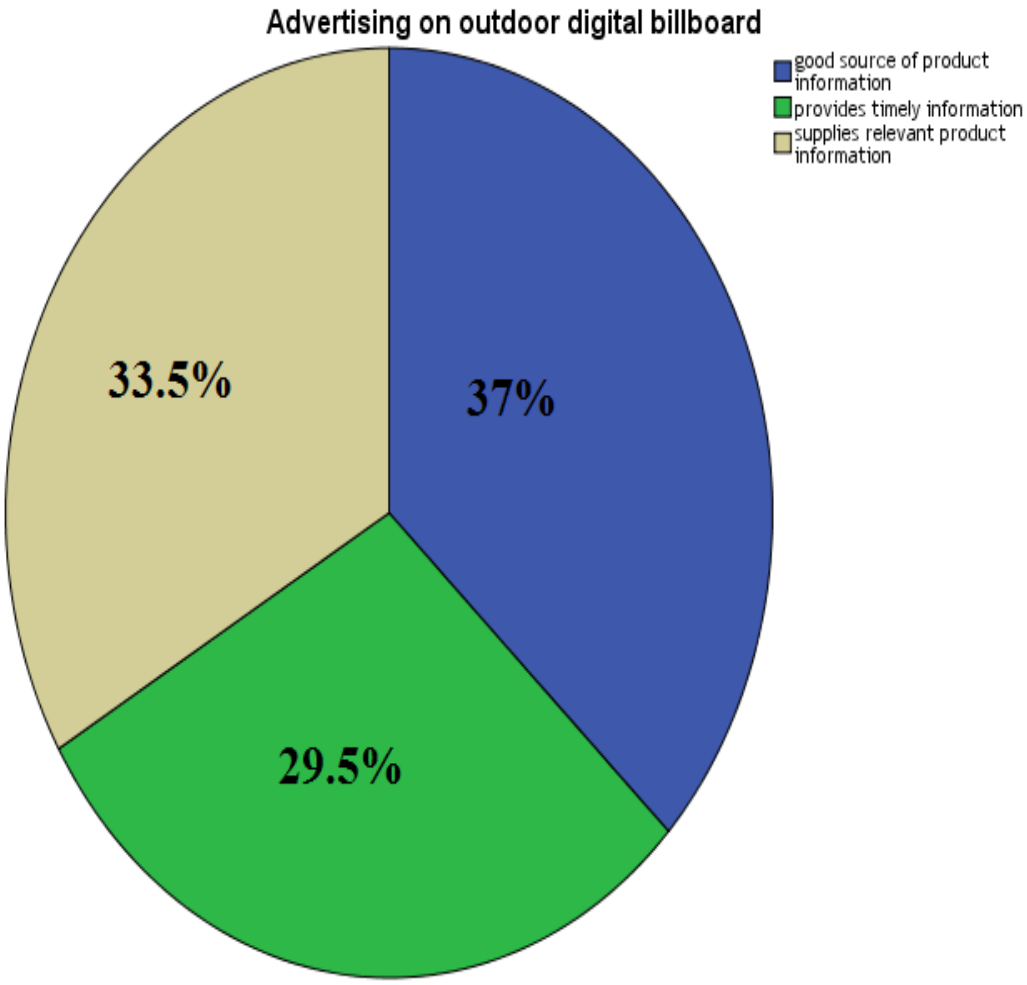


Table 4.8: Advertising on outdoor digital billboards

	Frequency	Percent	Valid Percent	Cumulative Percent
Good source of product information	**94**	**37.0**	**37.0**	**37.0**
Provides timely information	**75**	**29.5**	**29.5**	**66.5**
Supplies relevant product information	**85**	**33.5**	**33.5**	**100.0**
Total	**254**	**100.0**	**100.0**	

According to the above table 4.8, advertising on outdoor digital billboards is 37% good source of product information, 29.5% provides timely information and 33.5% supplies relevant product information.

Figure 4.9: The advertisements I saw were

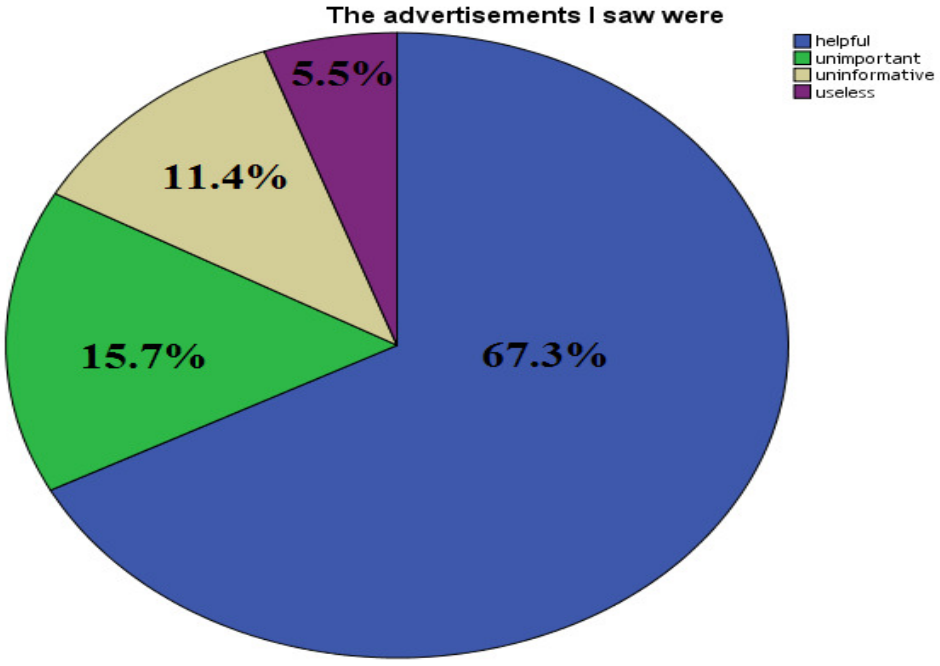


Table 4.9: The advertisements I saw were

	Frequency	Percent	Valid Percent	Cumulative Percent
Helpful	**171**	**67.3**	**67.3**	**67.3**
Unimportant	**40**	**15.7**	**15.7**	**83.1**
Uninformative	**29**	**11.4**	**11.4**	**94.5**
Useless	**14**	**5.5**	**5.5**	**100.0**
Total	**254**	**100.0**	**100.0**	

Based on the table 4.9 above, the advertisements respondents saw were 67.3% helpful, 15.7% unimportant, 11.4% uninformative and lastly 5.5% useless.

4.1.2 Central Tendencies Measurement of Constructs

Table 4.10: Central Tendencies Measurement of Constructs

Variables	Items	Mean	Standard deviation
Digitalization	D1=I feel that outdoor digital billboard advertisements are enjoyable.	3.52	.993
	D2=I feel that outdoor digital billboard advertisements are entertaining.	3.72	.856
	D3=I like the graphics on the outdoor digital billboard advertisements.	3.47	1.109
	D4=I usually do not pay attention to advertisements.	3.35	1.082
Informative	I1=Outdoor digital billboard advertisements provide the useful information I need.	3.49	.993
	I2=I feel that outdoor digital billboard is a good source for timely information.	3.63	.968
	I3=I feel that outdoor digital billboard improves my	3.74	.968

	knowledge. I4=The information displayed by outdoor digital billboard is valuable.	3.73	1.1037
Irritation	R1=I found the advertisements quite annoying. R2=I found the advertisements quite irritating. R3=I was bored by the advertisements. R4=For me, advertising on outdoor digital billboards is too loud. R5=For me, advertising on outdoor digital billboards is repeated too often. R6=For me, all advertisement are alike.	2.5 2.42 2.61 2.41 2.65 2.33	.726 .861 .666 .742 1.014 .806
Credibility	C1=For me, advertising on outdoor digital billboards are trustworthy. C2=For me advertising on outdoor digital billboards are convincing. C3=For me advertising on outdoor digital billboards are authentic. C4=For me, advertising on outdoor digital billboards are honest. C5=For me, advertising on outdoor digital billboards are conclusive. C6=For me, advertising on outdoor digital billboards are unquestionable.	3.52 3.72 3.47 3.35 3.51 3.11	.993 .856 1.109 1.082 1.1013 1.056
Satisfaction	S1=I feel satisfied when looking at ads on outdoor digital billboards. S2=I feel delighted when looking at ads on outdoor digital billboards. S3=I feel the ads on outdoor digital billboards are favorable. S4=I feel contented when looking at ads on outdoor digital billboards.	3.74 3.48 3.45 3.75	.939 1.062 1.019 .957

	S5=I like to see ads on outdoor digital billboards very much.	3.56	1.662

D1 to D4 Questions for Digitalization

I1 to I4 Questions for Informative

R1 to R6 Questions for Irritation

C1 to C6 Questions for Credibility

S1 to S5 Questions for Satisfaction

(D2=I feel that outdoor digital billboard advertisements are entertaining) has the highest mean value 3.72 at with standard deviation of 0.856 while (D4=I usually do not pay attention to advertisements) shows the lowest mean value at 3.35 with standard deviation of 1.082.

(I3=I feel that outdoor digital billboard improves my knowledge) has the highest mean value 3.74 at with standard deviation of 0.968 while (I1=Outdoor digital billboard advertisements provide the useful information I need) shows the lowest mean value at 3.49 with standard deviation of 0.993.

(R5=For me, advertising on outdoor digital billboards is repeated too often) has the highest mean value 2.65 at with standard deviation of 1.014 while (R6=For me, all advertisement are alike) shows the lowest mean value at 2.33 with standard deviation of 0.806.

(C2=For me advertising on outdoor digital billboards are convincing) has the highest mean value 3.72 at with standard deviation of 0.856 while (C6=For me, advertising on outdoor digital billboards are unquestionable) shows the lowest mean value at 3.11 with standard deviation of 1.506.

(S4=I feel contented when looking at ads on outdoor digital billboards) has the highest mean value 3.75 at with standard deviation of 0.957 while (S3=I feel the ads on outdoor digital billboards are favorable) shows the lowest mean value at 3.45 with standard deviation of 1.019.

4.2 Scale Measurement

4.2.1 Reliability Analysis

As mentioned in the earlier chapter, reliability test is used to evaluate the data and indicates the consistent results. According to Malhotra (2007), the reliability coefficient varies from 0 to 1, which means that if the value of Cronbach' Alpha is less than 0.60 which indicated that there is unsatisfactory internal consistency whereas if the value is more than 0.60 which indicated that there is satisfactory internal consistency.

Table 4.11: Reliability Statistics for Pilot Test (n=50)

NO	Variables/ Constructs	Cronbach's Alpha	No. of Items
1	Digitalization	0.843	4
2	Informative	0.868	4
3	Irritation	0.829	6
4	Credibility	0.785	6
5	Satisfaction	0.774	5

Reliability test is used to examine the internal reliability of the pilot test according to Cronbach's Alpha model. The Table 4.11 shows the Cronbach's Alpha value which is digitalization is 0,843, informative is 0.868, irritation is 0.829, credibility is 0.785 and satisfaction is 0.774. Overall, the internal reliabilitycoefficients for entire constructs are medium strong to very strong as every alpha coefficient are more than 0.7. Conclusion, this is a satisfactory internal consistency.

Table 4.12: Reliability Statistics (n=254)

NO	Variables/ Constructs	Cronbach's Alpha	No. of Items
1	Digitalization	0.692	4
2	Informative	0.771	4
3	Irritation	0.722	6
4	Credibility	0.662	6
5	Satisfaction	0.671	5

The Table 4.12 shows the reliability analysis for the actual project. The sample size is 254 respondents. According to the table above, the value for Cronbach's Alpha of digitalization is 0.692, informative 0.771, irritation is 0.722, credibility is 0.662 and satisfaction is 0.671. Overall, the internal reliability coefficient for entire constructs reliable as every Cronbach's Alpha result of the variables tested is above 0.6. In conclusion, this indicates the measurement scales of the constructs have satisfactory internal consistency.

4.3 Inferential Analysis

The inferential analyses include the Pearson correlation analysis and multiple regression analysis as shown below, for test significant relationship between independent variables and dependent variable.

4.3.1 Pearson Correlation Analysis

Table 4.13: Correlation

		Digitalization	Informative	Irritation	Credibility	Satisfaction
Digitalization	Pearson Correlation	1	.686**	.488**	.938**	.645**
	Sig. (2-tailed)		.000	.000	.000	.000
	N		254	254	254	254
Informative	Pearson Correlation	.686**	1	-.516**	.732**	.721**
	Sig. (2-tailed)	.000		.000	.000	.000
	N	254	254	254	254	254
Irritation	Pearson Correlation	-.488**	-.516**	1	-.566**	-.530**
	Sig. (2-tailed)	.000	.000		.000	.000
	N	254	254	254	254	254
Credibility	Pearson Correlation	.938**	.732**	-.466**	1	.630**
	Sig. (2-tailed)	.000	.000	.000		.000
	N	254	254	254	254	254
Satisfaction	Pearson Correlation	.645**	.721**	-.530**	.630**	1
	Sig. (2-tailed)	.000	.000	.000	.000	
	N	254	254	254	254	254

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

Based on the Table 4.13 above, it indicates the correlation matrix examining the relationship among the five variables. It shows positive relationship between the independent and the dependent variable. The variables are measured between digitalization, informative, irritation and credibility towards satisfaction. All the variables are at 0.01 levels ($p < 0.01$), therefore every variables are positively correlated to each other. Furthermore, all the variables are positively correlated because there is no negative sign in the results except irritation. Irritation is a negative result because the variable itself is a negative variable. Which means, a negative result of the irritation means it have a positive relation towards the viewer satisfaction. The results of the Pearson Correlation analysis are digitalization is r=0.645, informative is r=0.721, irritation is r=-0.530 and credibility is r=0.630. This shows every variable have a positive relation towards the satisfaction.

4.3.2 Multiple Regression Analysis

Multiple regression analysis is used to predict a continuous dependent variable from a number of independent variable.

Table 4.14: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.766[a]	.586	.579	2.47020

a. Predictors: (Constant), Digitalization, Informative, Irritation and Credibility.

Table 4.14 above shows that R square is 0.586 which indicate that 58.6%. Thus, this means 58.6% of satisfaction (dependent variable) is influence by the digitalization, informative, irritation and credibility (independent variable).

Table 4.15: ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2151.439	4	536.860	**88.147**	**.000**[b]
	Residual	1519.368	249	6.102		
	Total	3670.807	253			

a. Dependent variable: Satisfaction
b. Independent variable: Credibility, Irritation, Informative and Digitalization

Table 4.15 above shows the result of Anova test that was conducted using SPSS. F value is 88.147, p-value = 0.000 which is less than 0.01. Thus, this indicate that there is significant relationship between all independent variables and dependent variable.

Table 4.16: Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	8.529	1.654		5.157	.000
Digitalization	.500	.155	.384	3.222	.001
Informative	.621	.078	.498	7.944	.000
Irritation	-.201	.059	-.166	-3.405	.001
Credibility	-.176	.128	-.172	-1.371	.172

a. Dependent Variable: Satisfaction

Customer Loyalty = 8.529 + 0.500 (Digitalization) + 0.621 (Informative) + (-.0201) (Irritation) + (-0.176) (Credibility)

According to the equation above and Table 4.16, regression coefficient of digitalization is 0.500. This indicates that increase of 1 value unit of digitalization, viewer satisfaction towards the digital billboards will increase by 0.500. Next, regression coefficient of informative is 0.621 which shows that increase of 1 value units of informative, the viewer satisfaction towards the digital billboards will increase by 0.621. Following, regression coefficient of irritation is -0.117. Thus, if an

increase of 1 value unit of corporate image, the viewer satisfaction towards the digital billboards will decrease by 0.117. Regression coefficient of credibility is -0.176 which indicates that increase of 1 value unit of credibility, viewer satisfaction towards the digital billboards will decreases by 0.176.

4.3.3 Test of Significant

Hypothesis 1

H0: There is no significant relationship between digitalization and audience gratification on digital billboards.

H1: There is a significant relationship between digitalization and audience gratification on digital billboards.

Reject H_0, if $p < 0.05$

Based on Table 4.11, the significant value of digitalization is 0.001, which is below p-value of 0.05. Hence, H_0 is rejected, which indicates there is a significant relationship between digitalization and audience gratification on digital billboards.

Hypothesis 2

H0: There is no significant relationship between informativeness and audience gratification on digital billboards.

H2: There is a significant relationship between informativeness and audience gratification on digital billboards.

Reject H_0, if $p < 0.05$

Based on Table 4.11, the significant value of informative is 0.000, which is below p-value of 0.05. Hence, H_0 is rejected, which indicates there is a significant relationship between informative and audience gratification on digital billboards.

Hypothesis 3

H0: There is no negative significant relationship between irritation and audience gratification on digital billboards.

H3: There is a negative significant relationship between irritation and audience gratification on digital billboards.

Reject H_0, if $p < 0.05$

Based on Table 4.11, the significant value of irritation is 0.001, which is below p-value of 0.05. Hence, H_0 is rejected, which indicates there is a negative significant relationship between irritation and audience gratification on digital billboards.

Hypothesis 4

H0: There is no significant relationship between credibility and audience gratification on digital billboards.

H4: There is a significant relationship between credibility and audience gratification on digital billboards.

Reject H_0, if $p < 0.05$

Based on Table 4.11, the significant value of credibility is 0.172, which is above p-value of 0.05. Hence, H4 is rejected, which indicates there is no significant relationship between credibility and audience gratification on digital billboards.

4.4 Conclusion

In this chapter, the results from descriptive analysis, scale measurement and inferential analysis that was produced out by SPSS were utilized to assess and investigate the respondents' demographic profile, dependability of five variables and test whether the free and go between variables has huge effect on subordinate variable or not. The following part will further talk about the major discoveries in our exploration and concluding our research.

CHAPTER 5: DISCUSSION, CONCLUSION AND IMPLICATION

5.0 Introduction

This chapter discusses the findings of the previous chapter and interprets the summary of statistical analyses. Furthermore, it discusses implications and limitations of the study. It also includes recommendations for future research.

5.1 Summary of Statistical Analyses

5.1.1 Descriptive Analyses

Out of 254 respondents, the majority of the respondents are male which is 50.8% of the total respondents while 49.2% of the respondents are female.Highest majority of respondents are from age 20 to 24 which is 37.8%, next is from age 25 to 29 is 16.9%, third isfrom age 40 and above is 16.1%, fourth is from age 35 to 39 is 14.2%, fromage 30 to 34 is 9.1%, and lastly from age 15 to 19 is 5.9%. The majority of the respondents are Chinese with 63.8%, followed by Malay with 18.5%, Indian 16.9 and lastly Sikh 0.2%. Most of the respondents are degree holder which is 53.5%, diploma holder is 24.4%, high school graduate is 13.8% and master holder is 8.3%. Majority of them are employed wages which is 55.1%, followed by student is 29.5%, self-employed is 7.5%, homemaker is 5.9% and lastly the retiree is 2%. The respondents thoughts while viewing the ad were attractive is 29.1%, followed by clear is 24.8%, unattractive is 18.1%, vivid is 10.2%, vague is 9.1% and lastly dull is 8.7%. The respondents perceived that advertising on outdoor digital billboard pleasing is 44.9%, followed by entertaining is 32.3% and enjoyable is 22.8%. The breakdown of the

respondents'perceived advertising on outdoor digital billboards is a good source of product information is 37%, 33.5% agree with the advertising supplies relevant product informationand 29.5% of them believed it provides timely information. Lastly, most of the respondents believed the advertisements that they saw were 67.3% helpful, followed by 15.7% unimportant, 11.4% uninformative and lastly 5.5% useless.

5.1.2 Scale Measurement

5.1.2.1 Reliability Analysis

Reliability test is used to examine the internal reliability of the actual results. Based on the table 4.12,informative(0.771) has the highest level of alpha coefficient value, followed by irritation (0.722), digitalization (0.692), and credibility (0.662). For the dependent variable, satisfaction is 0.671. As every Cronbach's Alpha result of the variables tested is above 0.6, the variables show high significant and reliability.

5.1.3 Inferential Analysis

5.1.3.1 Pearson Correlation Analysis

According to Table 4.13, the results show that all the variables are at 0.01 levels ($p < 0.01$) which indicate every variable are positively correlated to each other. Informative as the independent variable has the strongest positive correlation to satisfactionwhere r=0.721, followed by digitalization (r=0.645), credibility (r=0.630) and lastly irritation (r=-0.530) which is negative correlated to satisfaction.

5.1.3.2 Multiple Regression Analysis

Multiple regressions analysis is done to test the relationship between independent variables and the dependent variable. Based on Table 4.14, it shows that R square is 0.586 which indicate that 58.6% of satisfaction (dependent variable) is affected by the digitalization, informative, irritation and credibility (independent variable).Besides, Table 4.15 shows the result of Anova test where F value is 88.147 with p-value = 0.000 which is less than 0.01. This indicates that there is significant relationship between all independent variables and dependent variable.

Based on Table 4.16, the regression coefficient of informative is 0.621 which indicate informative has high positive correlation with satisfaction and followed by digitalization at 0.500. Besides,the regression coefficient of credibility is -0.176 which shows that there is high negative relationship between credibility and satisfaction. Lastly, the regression coefficient of irritation is -0.117 which indicates that irritation is negatively correlated with satisfaction.

5.2 Discussion of Major Findings

Table 5.1: Summary of Research question, Hypothesis and Result

Research Question	Hypothesis	Results	Accepted/ Rejected
Does digitalization influences audiences' gratification towards digital billboards?	**H1:** There is a significant relationship between digitalization and audience's gratification on digital billboards.	0.001 P < 0.05	Accepted
To what extent the informativeness of digital billboards influence the audiences' gratification?	**H2:** There is a significant relationship between informativeness and audience's gratification on digital billboards.	0.000 P < 0.05	Accepted
To what extent the irritation of digital billboards influence the audiences' gratification?	**H3:** There is a negative relationship between irritation and audience's gratification on digital billboards.	0.001 P < 0.05	Accepted
Do audiences perceive credibility in advertisements displayed on digital billboards?	**H4:** There is a significant relationship between credibility and audience's gratification on digital billboards.	0.172 P < 0.05	Rejected

5.2.1 Digitalization

H0: *There is no significant relationship between digitalization and audience gratification on digital billboards.*

H1: *There is a significant relationship between digitalization and audience gratification on digital billboards.*

Based on the result from Pearson Correlation Analysis, digitalization is significantly correlated with audience gratification (r=0.645). Besides, the multiple regression analysis results found that digitalization is influencing audience gratification towards advertising through digital billboard positively (p=0.500). Hence, the hypothesis (H1) is accepted as there is a significant relationship between digitalization and audience gratification on digital billboards. Meanwhile, in the internal reliability test, the Cronbach's Alphavalue for digitalization is 0.692.

The finding is corroborative with the study done by Ducoffe (1995) that entertainment is significantly related to advertisement value among consumers. This finding is also further supported from various past studies by respectful researchers that applied the uses and gratification theory to conceptualize the relationship or effect of features as well as entertainment on audience gratification in which the results are in line with this research (Adetunji & Yazam, 2012 as cited in Luo, 2002; Livaditi, Qimei & Wells, 1999; and MacMillan, 2000). Similarly, audience is attracted to the vividness, animated and interactive features of digital billboards that eventually lead to feeling of satisfaction.

Thus, the research objective to assess the relationship between digitalization and audience gratification is achieved. Besides, the research question of "Does digitalization influences audiences' gratification towards digital billboards?" is also answered accordingly in this study.

5.2.2 Informativeness

H0: *There is no significant relationship between informativeness and audience gratification on digital billboards.*

H2: *There is a significant relationship between informativeness and audience gratification on digital billboards.*

From Pearson Correlation Analysis, informativeness is significantly correlated with audience gratification (r=0.721). It shows that informativeness has the strongest significant correlation with audience gratification. Next, the multiple regression analysis shows that informativeness is influencing audience gratification towards digital billboards positively (p=0.621). Therefore, the hypothesis (H2) is accepted as there is significant relationship between informativeness and audience gratification on digital billboards. At the same time, internal reliability test shows Cronbach's Alpha value for informativeness is 0.771 which is the highest score compared with other variables.

The finding is consistent with the argument by Chien (2011) with proven findings that information is essential to be displayed regardless in the form of traditional or digital billboards. Moreover, this present study findings also confirm the findings of Adetunji & Yazam (2012), Luo (2002), and Ducoffe (1995) in the context of digital billboards. In addition, information seekers tend to pay more attention to the advertisement displayed (Rettie, Robinson & Jenner, 2001 as cited in Li & Bukovac, 1999). Likewise, audience values the effectiveness of advertising through digital billboard that provides information about products or services.

Therefore, the research objective to assess the relationship between informativeness and audience gratification on digital billboard is achieved. On the other hand, the research question of "To what extent the informativeness of digital billboards influence the audiences' gratification?" is also answered in this study.

5.2.3Irritation

H0: *There is no significant relationship between irritation and audience gratification on digital billboards.*

H3: *There is a negative significant relationship between irritation and audience gratification on digital billboards.*

By referring to the result from Pearson Correlation Analysis, irritation is negative significantlycorrelated with audience gratification (r=-0.530).It shows that irritation has the weakest significant correlation with audience gratification. By referring to the multiple regression analysis results, it shows that irritation is affecting audience gratification towards digital billboards negatively(p=-0.117), which means that individuals do experience irritation from digital billboard advertising and have negative feelings with little or no satisfaction towards the new technology. Meanwhile, the internal reliability test, the Cronbach's Alpha value for irritation is 0.722. Thus, the hypothesis (H3) is supported as there is a negative significant relationship between irritation and audience gratification on digital billboards.

The findings in this current study are supported by Luo (2002) where he found out that people reject ads that are irritating that are shown in the digital billboards. Besides, this study also confirms the findings of Ducoffe (1996), Li et al. (2002), and Rettie et al. (2001). Furthermore, digital billboard can be a form of environmental pollution that can brings irritation to the audiences as stated by Chien (2011) and Speck and Elliott (1997).

Hence, the research objective to assess the relationship between irritation and audience gratification is satisfied. Besides, the research question of "Are audiences experiencing or addressing irritation issues from digital billboards?" is answered in this study.

5.2.4Credibility

H0: *There is no significant relationship between credibility and audience gratification on digital billboards.*

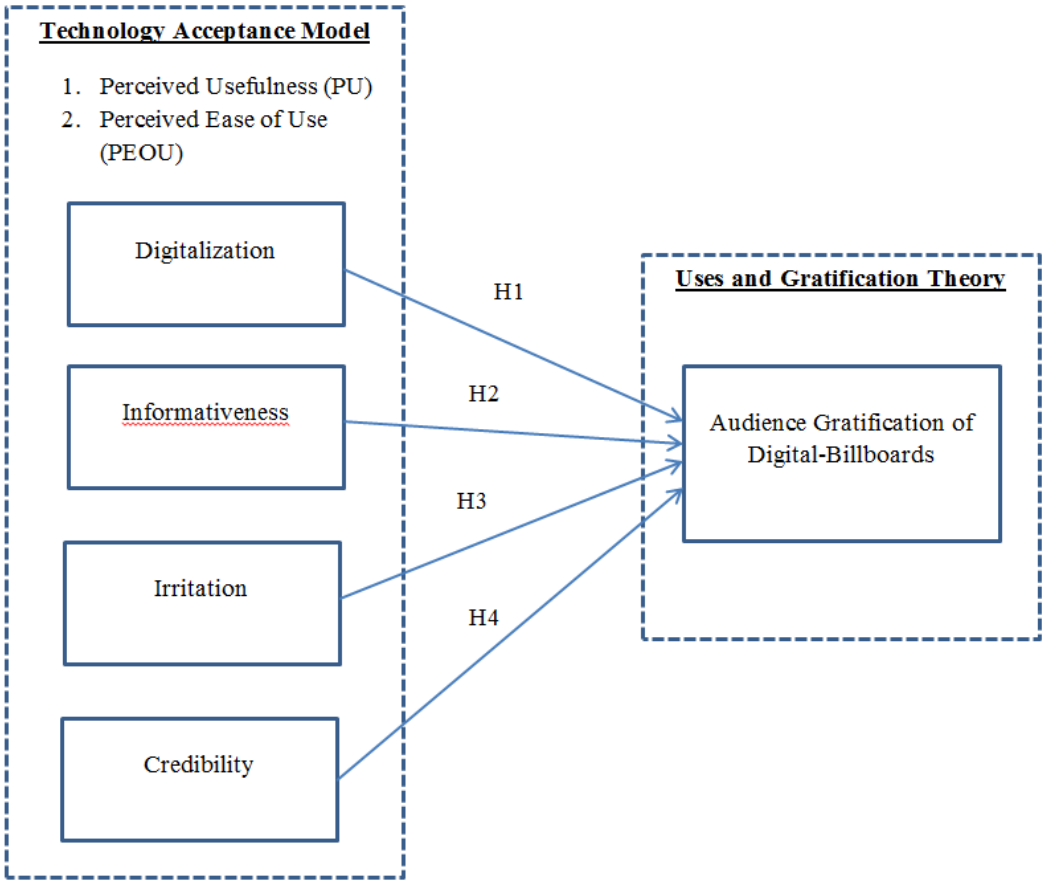
H4: *There is a significant relationship between credibility and audience gratification on digital billboards.*

Based on the Pearson Correlation analysis, credibility is significantly correlated with audience gratification (r=0.630). Besides, the multiple regression analysis indicates that credibility is not affecting audience gratification towards digital billboards (p=-0.176). Therefore, the hypothesis (H4) is rejected as there is no significant relationship between credibility and audience gratification on digital billboards. Meanwhile, in the internal reliability test, the Cronbach's Alpha value for credibility is 0.662which is the lowest score compared with other variables.

Most ofthe past studies indicate that credibility of ads is positively correlated with the attitude of audiences towards the ads. Bachman (2013) stated that advertisement nowadays does not have enough credibility which may affect the audiences' satisfaction negatively but the findings of this study do not reflect the past studies as the findings show there no significant relationship between credibility and audiences' gratification. This indicates that the audiences do not take credibility of ads into count and the ads trustworthiness does not affect audiences' gratification.

In this case, credibility is not a factor that influences audience gratification. Therefore, the objective of research to assess the relationship between credibility and audience gratification on digital billboards has been met. Besides, the research question of "Do audiences perceive credibility in advertisements displayed on digital billboards?" is also answered through this study.

Figure 2.2: Proposed Conceptual Framework for Determinants of Digital Billboards that Influences Audience's Attitude



Source: Developed for research

5.3 Implications of the Study

Results retrieved from analysis are important and substantial to aid managers and marketers in developing and planning of sales strategies and targets in the business, as well as managing the business development to achieve goals and objectives.Based on the proposed framework, marketers could determine the degree of influence of the factors that affect the audience's gratitude towards digital billboards and making sure messages delivered via digital billboards are effective.

5.3.1 Managerial Implication

5.3.1.1 Digitalization

Based on the results, it is found that digitalization has positive impact on influencing audience gratification on advertising via digital billboard.According to several out of home advertising websites, the rates of advertising vary according to size, location, schedules of displays (e.g. daily, weekly, monthly), and minimum message display duration. The large display of digital billboards portrays larger images and characters appear to be brighter and can be seen and read from a distant. In conjunction, it is generally understood that bright lights and motion pictures can draw attention due to its illumination that is brighter than the surroundings as well as the visual movements presented (Jerry, 2009). Similarly, high cost may occur in order to capture mass audience attention.

Besides that, color can attract audience to pay attention on the advertisement (Fernandez & Rosen, 2000). Fernandez & Rosen, 2000 also cautioned that color can enhance the product's appealand substantiate verbal claims and markedly increase the chances of consumer seeking the advertiser when used carefully or vice versa. Not only the combination or selection of color is the key to attract audience attention, entertainment is equally important.Ducoffe (1995) explained that to optimize the value of advertisement, the message should be delivered creatively and able to entertain audience. Nevertheless, the goal of advertising through digital billboard is to create brand awareness and to increase sales which in return, the organization benefits from higher return on investment.

5.3.1.2 Informativeness

Furthermore, among the independent variables tested for this research, informativeness plays the most influencing role in the audience gratification on digital billboard advertising. Although messages displayed on digital billboard is essentialand able to satisfy audience expectations, however, the information presented should not hold their attention for too long. For that reason, audience may miss out the rest of the details from the advertisement after successive display or may even cause unsafe driving as well as traffic congestion among drivers that slow down to read the message. Therefore, one must keep in mind that message lengths must be kept short and simple so that the advertisement is optimized for legibility and readability among target audience (Jerry, 2009).

In Malaysia, there is lack of guidelines specifically on the amount of information to be displayed on outdoor digital signage. Whereas, there are many research carried on information presentation and road safety in both the United States and abroad has developed consistent and clear guidelines for display characteristics including rapid,

unambiguous message interpretation as well as ease of reading among audience (Jerry, 2009). Hence, the amount of information should be carefully evaluated even though is not restricted by the Advertising Standards Authority (1997) Malaysia.

5.3.1.3 Irritation

Besides that, the finding from the research revealed that irritation is another contributing factor that has a negative impact on audience gratification towards digital billboard advertising. To avoid or reduce any case of irritation in digital billboard advertising, the advertisement must not causes any major distraction towards the drivers (audiences) as to avoid any road accidents (Jessica, Tim, Simon, and Itan, 2011). To further reduce the amount of irritation on the drivers, one must avoid using excessive unnecessary graphic and noises of advertisement on digital billboards. This is to ensure lesser distractions towards the drivers and at the same time reduces irritation.

Besides, the positioning of the digital billboards should not be perceived as a form of pollution towards natural views which can cause irritation to the audiences (Chien, 2011). Therefore, it is important to check the level of irritation of digital billboards as to avoid discomfort and unpleasantness towards the audiences (Luo, 2002). The lower the irritation of digital billboards, the higher the effectiveness of the advertisements.

5.3.1.4 Credibility

This study attains a distinct verdict that there is no relationship between credibility and audience gratification. Nonetheless, one of the guidelines in Malaysian Code of Advertising Practice whichestablished by the Advertising Standards Authority (1997) states that all advertisements should be legal, honest, and truthful. Likewise, omission, ambiguity or exaggerated claim as well as statements or visual presentation that directly or by implication in an advertisement that are likely to mislead the consumer about the presented product or service should not be disregarded (Advertising Standards Authority, 1997). A booklet prepared by Malaysian Investment Development Authority (MIDA) (2012) on developing projects in Malaysia added that "*outdoor advertising guidelines and approvals are under the auspices of the respective state Government/ local authorities.*" Hence, if the proposed advertisement does not follow the laws and regulations imposed, the advertisement will be disapproved and will cause loss of opportunity and profit by the organization or small business.

5.4 Limitations of the Study

In this study, there are some limitations during the process of research. Firstly, there is lack of study particularly on the uses and gratification theory and Technology Acceptance Model on digital billboards. Likewise, rich information that can be obtained from qualitative study is neglected due to complexity and short time frame in conducting the research. Single quantitative method is used in this research whereby respondents are restricted to give opinions that are beyond the options provided in the survey questionnaire.

Limitations of time constraint and restriction of resources confine the respondents within Kuala Lumpur area to participate in the questionnaire survey randomly. In addition, potential respondents' opinions from other states such as Penang, Johor, and Malacca are not included in this study as the process of interview requires face to face interaction among respondents with the presence of digital billboard. The process is time consuming. Thus, this research is unable to generalize overall digital billboard advertising landscape in Malaysia.

In conjunction with lack of time and resources limits the translation and verification of questionnaire survey from English to Malay language by a qualified translator. It has been a challenge to ensure respondents are able to fully understand the survey questionnaire in English language as the level of understanding the language varies among each individual respondent. Unavoidably, respondents may misinterpret or misunderstood the some of the contents in the questionnaire and yet refuse to seek for clarification in providing accurate answer. Consequently, it is possible that respondents may answer the survey questionnaire depending on their feelings, intuition, and making guesses to complete the survey. However, further explanations were still given to respondents to ensure optimum accuracy of data collection. Hence, this causes the survey questionnaire process to be slower.

Furthermore, the variables tested limits to four independent variables namely digitalization, informativeness, irritation, and credibility. There are other variables that may influence the audience's gratification towards digital billboards such as display environment, size of digital billboard, the ability to recall advertisements and others that had been discussed by previous researchers or academicians are not explored in this research.

5.5 Recommendations for Future Research

There are several recommendations to improve the quality of future research on audience gratification towards digital billboards. Future researchers are suggested to include qualitative research in the study as the method can provide an ambiguous, complex, and elastic information that may not be obtained from quantitative research.

Next, the duration of research should be extended in order for future researchers to have sufficient time to plan for resources in terms of travel and accommodation if necessary to reach out to potential respondents from other areas in Malaysia. For instance, Penang, Johor, and Malacca is recommended to be explored and conduct interviews and surveys on audience gratification towards digital billboards as this new technology are spotted emerging in these states. This would increase the sample size and improves the overall results and findings from the research which can be used to represent the digital media landscape of Malaysia.

Furthermore, future researchers should consider to include Malay language in the survey questionnaire as Bumiputera are in fact, accounts the majority race in Malaysia. Besides, there are other races that understand Malay language better than English language. By including dual language in the survey questionnaire, this would minimize the difficulties faced by some respondents and this would also reduce the need for researcher to give additional explanations from the questionnaire survey. Thus, the speed of data collection is not only increased but accurate response from respondents will also be obtained.

Lastly, future researchers are encouraged to take other variables that affect audience's gratification of digital billboards into consideration. This would allow researcher to have more comprehensive understanding on the needs and demands of today's consumer even though more time will be spent in the research review process. Likewise, the study will provide a wider perspective and enhances the scope of

research in understanding the factors in TAM model that affects audiences' gratification towards digital billboards.

5.6 Conclusion

This study was done to explore the determinants of audiences' gratification towards digital billboards by clarifying digitalization, informativeness, irritation, and credibility. In conjunction, the objective of this research project has been fulfilled in identifying four variables towards audience's gratification on digital billboards.

After testing the Pearson Correlation Analysis, Multiple Regression Analysis, and Internal Reliability Analysis Test, result obtained indicates that the following variables: digitalization, and informativeness,have positive significant relationship with the audiences' gratification while irritation has negative significant relationship with the audiences' gratification. On the other hand, this study found that credibility does not have an impact on audience gratification on digital billboards.

Moving on, the outcome of this research showed that informativenss is the most important element that influences audiences' gratification towards digital billboard advertising and credibility is the least important factor. Besides, this chapter has discussed the usefulness of the factors for marketers and managers to make the most strategic decision in advertising via digital billboard. Furthermore, the barriers met provided with valuable suggestions for future researchers are stated in this chapter.

All in all, digital billboard will continue to develop and grow in near future as this device is not only economical and effective in delivering messages but it is also an unavoidable realm from which to reach progressively elusive audiences. Likewise,

digital billboard acts as an ideal anchor of integrated marketing communication among marketers and advertisers. Therefore, this study provides information for future researchers, academicians and organizations that are interested to make further investigations on the factors influencing audiences' gratification on digital billboards.

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Appendix A: Questionnaire

BACHELOR OF INTERNATIONAL BUSINESS (HONS)
FINAL YEAR PROJECT

TITLE OF RESEARCH:

The Determinants of Audience Gratification towards Digital Billboards

Survey Questionnaire

Dear respondents,

We are undergraduate students of Bachelor of International Business (Hons), from Universiti Tunku Abdul Rahman (UTAR). The **purpose** of this study is to find out the audience satisfaction from advertising through digital billboards in Kuala Lumpur. Your answers will be kept **PRIVATE** and **CONFIDENTIAL** and used solely for academic study purposes.

Thank you for your cooperation.

Name	**ID No.**
Koh Yi Luan	11UKB01348
Lok Chuan Ming	11UKB07426
Syed Hasif	09UKB04430

Instructions:

1. There are **THREE parts**in this questionnaire. Please answer ALL questions in ALL sections.
2. Section A consists of questions on Construct Measurement. In Section B, it consists of questions related to the General knowledge. In Section C, the questions are pertaining to the respondents' demographic profiles.
3. The contents of this questionnaire will be kept **strictly confidential**. Completion of this form will take you approximately 10 to 15 minutes.

Directions: Think in **general** about advertising in all of its various forms that you have been exposed to, not a single advertisement or advertising for a particular type of product or service.

PART ONE

Section A: Construct Measurement

Place a circle from 1 (Strongly Disagree) to 5 (Strongly Agree), where:

Strongly Disagree (SD)	Disagree (D)	Neutral (N)	Agree (A)	Strongly Agree (SA)
1	2	3	4	5

Digitalization

		SD	D	N	A	SA
6.	I feel that outdoor digital billboard advertisements are enjoyable.	1	2	3	4	5
7.	I feel that outdoor digital billboard advertisements are entertaining.	1	2	3	4	5
8.	I like the graphics on the outdoor digital billboard advertisements.	1	2	3	4	5
9.	I usually do not pay attention to advertisements.	1	2	3	4	5

Informative

		SD	D	N	A	SA
10.	Outdoor digital billboard advertisements provide the useful information I need.	1	2	3	4	5
11.	I feel that outdoor digital billboard is a good source for timely information.	1	2	3	4	5
12.	I feel that outdoor digital billboard information improves my knowledge.	1	2	3	4	5
13.	The information displayed by outdoor digital billboard is valuable.	1	2	3	4	5

Irritation

		SD	D	N	A	SA
14.	I found the advertisements quite annoying.	**1**	**2**	**3**	**4**	**5**
15.	I found the advertisements quite irritating.	**1**	**2**	**3**	**4**	**5**
16.	I was bored by the advertisements.	**1**	**2**	**3**	**4**	**5**
17.	For me, advertising on outdoor digital billboards is too loud.	**1**	**2**	**3**	**4**	**5**
18.	For me, advertising on outdoor digital billboards is repeated too often.	**1**	**2**	**3**	**4**	**5**
19.	For me, all advertisements are alike.	**1**	**2**	**3**	**4**	**5**

Credibility

		SD	D	N	A	SA
20.	For me, advertising on outdoor digital billboards are trustworthy.	**1**	**2**	**3**	**4**	**5**
21.	For me, advertising on outdoor digital billboards are convincing.	**1**	**2**	**3**	**4**	**5**
22.	For me, advertising on outdoor digital billboards are authentic.	**1**	**2**	**3**	**4**	**5**
23.	For me, advertising on outdoor digital billboards are honest.	**1**	**2**	**3**	**4**	**5**
24.	For me, advertising on outdoor digital billboards are conclusive.	**1**	**2**	**3**	**4**	**5**
25.	For me, advertising on outdoor digital billboards are unquestionable.	**1**	**2**	**3**	**4**	**5**

Satisfaction

		SD	D	N	A	SA
26.	I feel satisfied when looking at ads on outdoor digital billboards.	**1**	**2**	**3**	**4**	**5**
27.	I feel delighted when looking at ads on outdoor digital billboards.	**1**	**2**	**3**	**4**	**5**
28.	I feel the ads on outdoor digital billboards are favorable.	**1**	**2**	**3**	**4**	**5**
29.	I feel contented when looking at ads on outdoor digital billboards.	**1**	**2**	**3**	**4**	**5**
30.	I like to see ads on outdoor digital billboards very much.	**1**	**2**	**3**	**4**	**5**

PART TWO

Section B: General knowledge

31. My thoughts while viewing the ad were:

☐ Attractive/ Unattractive ☐ Vague/ clear ☐ Dull/ vivid

32. Advertising on outdoor digital billboards:

☐ Is entertaining. ☐ Is enjoyable. ☐ Is pleasing.

33. Advertising on outdoor digital billboard:

☐ Is a good source of product information.
☐ Supplies relevant product information.
☐ Provides timely information.

34. The advertisements I saw were…

☐ Helpful ☐ Uninformative
☐ Unimportant ☐ Useless

PART THREE

Section C: Demographic Information(Place a TICK for each question)

1. **Gender**

☐ Male ☐ Female

2. **Age**

☐ 15-19 ☐ 20-24 ☐ 25-29 ☐ 30-34 ☐ 35-39
☐ 40 and above

3. **Race**

☐ Malay ☐ Indian
☐ Chinese ☐ Other (Please specify): _____

4. **Education**

☐ High School ☐ Degree
☐ Diploma/ Certificate ☐ Master

5. **Professional or Employment Status**

☐ Student ☐ Homemaker (Eg. Housewife)
☐ Self-employed ☐ Retired
☐ Employed for wages ☐ Other (Please specify):
_____

Appendix B: SPSS output

Gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	129	50.8	50.8	100.0
	Female	125	49.2	49.2	49.2
	Total	254	100.0	100.0	

Age

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	15-19	15	5.9	5.9	5.9
	20-24	96	37.8	37.8	43.7
	25-29	43	16.9	16.9	60.6
	30-34	23	9.1	9.1	69.7
	35-39	36	14.2	14.2	83.9
	40 and above	41	16.1	16.1	100.0
	Total	254	100.0	100.0	

Race

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Malay	47	18.5	18.5	18.5
	Chinese	162	63.8	63.8	82.3
	Indian	43	16.9	16.9	99.2
	Sikh	2	.8	.8	100.0
	Total	254	100.0	100.0	

Education Level

	Frequency	Percent	Valid Percent	Cumulative Percent
Degree	**136**	**53.5**	**53.5**	**53.5**
Diploma	**62**	**24.4**	**24.4**	**78.0**
High School	**35**	**13.8**	**13.8**	**91.7**
Master	**21**	**8.3**	**8.3**	**100.0**
Total	**254**	**100.0**	**100.0**	

Employment Status

	Frequency	Percent	Valid Percent	Cumulative Percent
Employed wages	**140**	**55.1**	**55.1**	**55.1**
Homemaker	**15**	**5.9**	**5.9**	**61.0**
Retired	**5**	**2.0**	**2.0**	**63.0**
Self-Employed	**19**	**7.5**	**7.5**	**70.5**
Student	**75**	**29.5**	**29.5**	**100.0**
Total	**254**	**100.0**	**100.0**	

My thoughts while viewing the ad were

	Frequency	Percent	Valid Percent	Cumulative Percent
Attractive	**74**	**29.1**	**29.1**	**29.1**
Clear	**63**	**24.8**	**24.8**	**53.9**

Dull	**22**	**8.7**	**8.7**	**62.6**
Unattractive	**46**	**18.1**	**18.1**	**80.7**
Vague	**23**	**9.1**	**9.1**	**89.8**
Vivid	**26**	**10.2**	**10.2**	**100.0**
Total	**254**	**100.0**	**100.0**	

Advertising on outdoor digital billboard

	Frequency	Percent	Valid Percent	Cumulative percent
Enjoyable	58	22.8	22.8	22.8
Entertaining	82	32.3	32.3	55.1
Pleasing	114	44.9	44.9	100.0
Total	254	100.0	100.0	

Advertising on outdoor digital billboards

	Frequency	**Percent**	**Valid Percent**	**Cumulative Percent**
Good source of product information	**94**	**37.0**	**37.0**	**37.0**
Provides timely information	**75**	**29.5**	**29.5**	**66.5**
Supplies relevant product information	**85**	**33.5**	**33.5**	**100.0**
Total	**254**	**100.0**	**100.0**	

The advertisements I saw were

	Frequency	**Percent**	**Valid Percent**	**Cumulative Percent**
Helpful	**171**	**67.3**	**67.3**	**67.3**
Unimportant	**40**	**15.7**	**15.7**	**83.1**

Uninformative	**29**	**11.4**	**11.4**	**94.5**
Useless	**14**	**5.5**	**5.5**	**100.0**
Total	**254**	**100.0**	**100.0**	

Tendencies Measurement Central of Constructs

Variables	**Items**	**Mean**	**Standard deviation**
Digitalization	D1=I feel that outdoor digital billboard advertisements are enjoyable.	3.52	.993
	D2=I feel that outdoor digital billboard advertisements are entertaining.	3.72	.856
	D3=I like the graphics on the outdoor digital billboard advertisements.	3.47	1.109
	D4=I usually do not pay attention to advertisements.	3.35	1.082
Informative	I1=Outdoor digital billboard advertisements provide the useful information I need.	3.49	.993
	I2=I feel that outdoor digital billboard is a good source for timely information.	3.63	.968
	I3=I feel that outdoor digital billboard improves my knowledge.	3.74	.968
	I4=The information displayed by outdoor digital billboard is valuable.	3.73	1.1037
Irritation	R1=I found the advertisements quite annoying.	2.5	.726
	R2=I found the advertisements quite irritating.	2.42	.861
	R3=I was bored by the advertisements.	2.61	.666
	R4=For me, advertising on outdoor digital billboards is too loud.	2.41	.742
	R5=For me, advertising on outdoor digital billboards is repeated too often.	2.65	1.014
	R6=For me, all advertisement are alike.	2.33	.806

Credibility	C1=For me, advertising on outdoor digital billboards are trustworthy.	3.52	.993
	C2=For me advertising on outdoor digital billboards are convincing.	3.72	.856
	C3=For me advertising on outdoor digital billboards are authentic.	3.47	1.109
	C4=For me, advertising on outdoor digital billboards are honest.	3.35	1.082
	C5=For me, advertising on outdoor digital billboards are conclusive.	3.51	1.1013
	C6=For me, advertising on outdoor digital billboards are unquestionable.	3.11	1.056
Satisfaction	S1=I feel satisfied when looking at ads on outdoor digital billboards.	3.74	.939
	S2=I feel delighted when looking at ads on outdoor digital billboards.	3.48	1.062
	S3=I feel the ads on outdoor digital billboards are favorable.	3.45	1.019
	S4=I feel contented when looking at ads on outdoor digital billboards.	3.75	.957
	S5=I like to see ads on outdoor digital billboards very much.	3.56	1.662

D1 to D4 Questions for Digitalization

I1 to I4 Questions for Informative

R1 to R6 Questions for Irritation

C1 to C6 Questions for Credibility

S1 to S5 Questions for Satisfaction

Reliability Statistics for Pilot Test (n=50)

NO	Variables/ Constructs	Cronbach's Alpha	No. of Items
1	Digitalization	0.843	4
2	Informative	0.868	4
3	Irritation	0.829	6
4	Credibility	0.785	6
5	Satisfaction	0.774	5

Reliability Statistics (n=254)

NO	Variables/ Constructs	Cronbach's Alpha	No. of Items
1	Digitalization	0.692	4
2	Informative	0.771	4
3	Irritation	0.722	6
4	Credibility	0.662	6
5	Satisfaction	0.671	5

Inferential Analysis

Pearson Correlation Analysis

		Digitalization	Informative	Irritation	Credibility	Satisfaction
Digitalization	Pearson Correlation	1	.686**	.488**	.938**	.645**
	Sig. (2-tailed)		.000	.000	.000	.000
	N		254	254	254	254

Informative	Pearson Correlation	.686**	1	-.516**	.732**	.721**
	Sig. (2-tailed)	.000		.000	.000	.000
	N	254	254	254	254	254
Irritation	Pearson Correlation	-.488**	-.516**	1	-.566**	-.530**
	Sig. (2-tailed)	.000	.000		.000	.000
	N	254	254	254	254	254
Credibility	Pearson Correlation	.938**	.732**	-.466**	1	.630**
	Sig. (2-tailed)	.000	.000	.000		.000
	N	254	254	254	254	254
Satisfaction	Pearson Correlation	.645**	.721**	-.530**	.630**	1
	Sig. (2-tailed)	.000	.000	.000	.000	
	N	254	254	254	254	254

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

Multiple Regression Analysis

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.766[a]	.586	.579	2.47020

b. Predictors: (Constant), Digitalization, Informative, Irritation and Credibility.

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2151.439	4	536.860	**88.147**	**.000**[b]
	Residual	1519.368	249	6.102		
	Total	3670.807	253			

c. Dependent variable: Satisfaction

d. Independent variable: Credibility, Irritation, Informative and Digitalization

Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	8.529	1.654		5.157	.000
Digitalization	.500	.155	.384	3.222	.001
Informative	.621	.078	.498	7.944	.000
Irritation	-.201	.059	-.166	-3.405	.001
Credibility	-.176	.128	-.172	-1.371	.172

b. Dependent Variable: Satisfaction