DIGITAL BILLBOARD AS VISUAL POLLUTION AND ITS EFFECTS TOWARDS TRAFFIC ROAD SAFETY

PUTERI MURNIE ADYLA BINTI MEGAT AB RAHMAN

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DEDICATION

Specially dedicated to my parents.

For their endless love, support and encouragement

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ABSTRACT

Billboard is considered as one of the road furniture. Hence, the design and placement of this billboard is significant for the road user's safety. As the world is growing, the marketing industry progresses their advertising boards that leads to the creation of light emitting diodes (LED) billboards that displays full-color imagery. LED billboard advertisement are built with brighter signs which are visible from greater distances. The main purpose of this type of advertisements are to attract the attention of more road users with its electronic displays. However, this increasingly popular technology has created concerns and various complaints from the public about the size and the brightness of the digital billboards. The aim of this research is to study the issues of visual pollution focusing on digital advertising on the roadside which impacts on the drivers' visual performance. Methodology is divided into three stages which includes the initiation stage, data collection stage and data analysis stage. Compilation of data is focused on literature search, questionnaire forms and interviews with related authorities. This study has discovered 3 main issues of the roadside digital advertisements which are the high luminance level of the billboard, the glance behavior by the road users and the location of the billboard. In addition, the road users are found to be more sensitive towards the roadside digital advertisements compared to conventional advertisement, and perceived it could be a distraction towards the road users. Hence, the authorities have emphasized on the need for stricter regulation of digital billboards in order to reduce the potential hazards towards the road users. In conclusion, this study is important as to provide a method or course of actions on how this issue could be fixed as well as reducing the concerns of the public towards the danger of this digital billboard.

ABSTRAK

Papan iklan dianggap sebagai salah satu perabot jalan. Oleh itu, reka bentuk dan penempatan papan iklan ini penting untuk keselamatan pengguna jalan raya. Seiring dengan perkembangan dunia teknologi, industri pengiklanan telah menaiktaraf papan iklan mereka yang membawa kepada penciptaan papan iklan diod pemancar cahaya (LED) yang memaparkan citra warna penuh. Papan iklan LED dibina dengan papan tanda yang lebih terang dan dapat dilihat dari jarak yang lebih jauh. Tujuan utama iklan jenis ini adalah untuk menarik lebih banyak perhatian pengguna jalan raya dengan paparan elektroniknya. Namun, teknologi yang semakin popular ini telah menimbulkan kebimbangan dan pelbagai rungutan dari orang ramai mengenai saiz dan pencahayaan papan iklan digital. Tujuan penyelidikan ini adalah untuk mengkaji isu-isu pencemaran visual oleh papan iklan digital di pinggir jalan yang memberi kesan kepada prestasi visual pemandu. Metodologi terbahagi kepada tiga tahap yang meliputi tahap inisiasi, tahap pengumpulan data dan tahap analisis data. Penyusunan data difokuskan pada pencarian literatur, borang soal selidik dan wawancara dengan pihak berkuasa yang berkaitan. Kajian ini telah menemui 3 isu utama iklan digital di pinggir jalan iaitu tahap pencahayaan papan iklan yang tinggi, tingkah laku pandangan pengguna jalan raya dan lokasi papan iklan. Di samping itu, pengguna jalan raya didapati lebih peka terhadap iklan digital di pinggir jalan berbanding iklan konvensional, dan menganggap hal itu dapat mengganggu pengguna jalan raya. Oleh itu, pihak berkuasa telah menekankan perlunya garis panduan yang lebih ketat untuk papan iklan digital supaya dapat mengurangkan potensi kemalangan terhadap pengguna jalan raya. Kesimpulannya, kajian ini penting untuk memberikan jalan penyelesaian kepada masalah ini serta mengurangkan kebimbangan masyarakat terhadap bahayanya papan iklan digital ini.

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LIST OF ABBREVIATIONS

DBKL	-	Dewan Bandaraya Kuala Lumpur
MIROS	-	Malaysian Institute Road of Safety Research
KKR	-	Kementerian Kerja Raya
LED	-	Light-emittingDiodes
SPSS	-	Statistical Package for Social Science
UTM	-	Universiti Teknologi Malaysia

CHAPTER 1

INTRODUCTION

1.1 Introduction

Visual comfort in the surrounding environment is a very important matter as visual environment is the first impression of any environment (Sabah & Muna Hanim, 2015). Cities and towns are developing and growing day by day and so does the unwanted and unpleasant visual objects created by the humans. Visual pollution is an aesthetic matter that has been limiting a person's ability to see in a comforting manner and considerably blocking the vista of a place. Anything that visually disrupts the "pretty scenes' of a surrounding could be classify as a visual pollution.

This pollution is considered subjective. Thus, there are various sources that could be classified into a visual pollutant such as littered wastes, cluttered hanging phone and communication wires, bad road infrastructures, and uncontrolled or improper designs of media advertisements such as billboards and banners (Ahmed, Islam, Tuba, Mahdy, & Sujauddin, 2019; Wakil, et al., 2019; Voronych, 2013). Figure 1.0 shows an example of a visual pollutant.

Figure 1.1 Example of excessive advertisements (Choudhary, 2016)

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