

SITTING INTENTION IN OPEN SPACES USING THE THEORY OF
REASONED ACTION

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To my beloved

Parents and Brother

&

My beloved husband

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ABSTRACT

This study addresses the factors affecting sitting intention in open spaces based on the Theory of Reasoned Action. Theory of Reasoned Action is one of the important and related theories that researchers used for measuring behavioural actions. According to the theory and based on previous studies, this research used three variables, comfort, safety, accessibility, for finding the relation among these variables with attitude towards sitting intention in open spaces. Public spaces are perceived as being physically open and accessible to the general public that can help to promote a better relationship between students and their campus. Public spaces in campuses have a responsibility to provide usable, accessible open space for the users. One of the important features in campus open spaces is seating. Good seating opportunities enable numerous activities such as eating, reading, playing chess, watching people and talking, and these make open spaces attractive. Therefore, seating which enable these activities is vital to increase the quality of university campus's open spaces. Furthermore, seating allows people to linger and enjoy the presence of students directly or indirectly, along with the sights, sounds and smells of a space. The methods for this study were observation, site visits, photography and survey. The survey is based on questionnaire of students in the Universiti Teknologi Malaysia. A total of 310 questionnaires were distributed among students, and then collected 309 respondents' answers of which 306 were usable questionnaires. The results indicated that the two components of the Theory of Reasoned Action, attitude and subjective norm were positively and significantly related to sitting intention in open spaces. Moreover, the findings of this study indicated that comfort, safety, accessibility had positively and significantly related to attitude towards sitting intention in university campus open spaces.

ABSTRAK

Kajian ini menangani faktor-faktor yang mempengaruhi niat apabila duduk di ruang terbuka yang berdasarkan teori *reasoned action*. Teori *reasoned action* merupakan salah satu teori yang penting dan berkaitan digunakan untuk mengukur tingkah laku. Menurut teori ini dan berdasarkan kajian terdahulu, kajian ini menggunakan pembolehubah (iaitu keselesaan, keselamatan, kemudahsampaian) untuk mencari hubungan antara pembolehubah ini dengan sikap. Ruang awam dianggap sebagai ruang fizikal terbuka dan boleh diakses oleh orang awam yang juga boleh menggalakkan perhubungan yang baik antara kampus dan pelajar. Ruang awam di kampus mempunyai tanggungjawab menyediakan ruang terbuka yang berguna dan boleh diakses oleh pengguna. Salah satu ciri penting di dalam ruang kampus terbuka adalah tempat duduk. Peluang untuk duduk yang baik membolehkan pelbagai aktiviti dilakukan seperti makan, membaca, bermain catur, memerhati orang dan berbicara, dan ini membuatkan ruang terbuka itu menarik. Oleh itu, tempat duduk yang membolehkan pelbagai aktiviti ini adalah penting untuk meningkatkan kualiti ruang terbuka di kampus universiti. Tambahan pula, tempat duduk yang membolehkan orang ramai untuk berlegar dan menikmati kehadiran pelajar secara langsung atau tidak langsung, bersama-sama dengan pemandangan, bunyi dan bau ruang. Kaedah untuk kajian ini adalah pemerhatian, lawatan tapak, fotografi dan kajiselidik. Kajiselidik adalah berdasarkan soal selidik pelajar di Universiti Teknologi Malaysia. Hasil kajian ini menunjukkan bahawa berdasarkan teori *reasoned action*, pembolehubah sikap, norma subjektif dan faktor-faktor yang mempengaruhi sikap terhadap niat untuk duduk di ruang terbuka (iaitu keselesaan, keselamatan, kemudahsampaian) mempunyai kesan yang signifikan ke atas tingkahlaku duduk di ruang terbuka dalam kampus universiti.y

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CHAPTER 1

INTRODUCTION

This chapter provided basic information regarding the topic of this study. The discussion begins with introduction and information and background of the subject. Then, the needs for the study are present continued by the statement of the problems, purpose of this study, the research objectives and the significance of the study. Finally, the thesis organization is detailed out.

1.1 Introduction

This research conducted on factors (i.e. attitude, subjective norm, comfort, accessibility, and safety) that affect learning by sitting intention in open spaces based on Theory of Reasoned Action (TRA). (Case study i.e. Universiti Teknologi Malaysia campus). The study discussed the existence of sitting in open spaces in university campus.

College and university open spaces are for people. For learning, meeting, exploring, thinking, or relaxing. Campus spaces, particularly classrooms, and outsides of classrooms influenced students attitudes about education. Public open spaces in the universities offer a realm in which meaning and community can prevail through establishing social contact. Seating has a major role in this process of connection and re-connection between others and oneself. Seating allows Students and staff to linger and enjoy the presence of others directly or indirectly, along with the sights, sounds and smells of open spaces.

Strange and Banning (2002) believe that open space impacts learning and teaching, whether that space is openly considered or not. In fact, Dewey (1925) stated that “whether we permit chance environments to do the work, or whether we design environments for the purpose makes a great difference” he also stated that educational settings are better handed out by specificity rather than chance. In his meta-analysis of environmental effect on human behaviour, Moos (1986) determined that “the arrangement of environments is perhaps the most powerful technique we have for influencing human behaviour”.

Conventionally, education has thought of learning space in terms of formal education: lectures and classrooms halls that promote one-way communication. However, recently decision maker comprehend the impact of social learning informal learning, and the spaces wherein that take place: halls, cafeterias, even parking lots (Johnson and Lomas, 2005; Jamieson, 2000). Be it in the classroom or in the parking lot, during office hours or during a weekend poetry event, learning happens and is formed by the environment. Lombardi (2005) declares that university campuses recommend prospective students an education’s experience. They “promote themselves, first and foremost, as places with people”.

Marmot (2008) believes that the physical elements of the campus create the enabling situations for a complex social ecology to appear over time. Likewise, specialized work settings illustrate complex social structures that impact orientation into the field.

1.2 Statement of the problem

Nowadays, open spaces, outside the classroom are more useful than ever as learning spaces, for two reasons. First, portable technology means you don't have to be near a power outlet to work, and Wi-Fi brings online access to the remotest corner of campus. Second, college work now involves a lot of group projects. More assignments reflect and teach real-world knowledge economy skills: collaborating in pairs, small groups, and teams. Since many classrooms poorly support group work, students often decamp to places better suited to working together.

In addition, one of the best ways to persuade students to tarry in public open space is to provide appropriate opportunities to sit down. Certainly, some recent research, undertaken into the preferences of users of public open space found that "sitting places" was their second most important requirement (after "space that is welcoming, regardless of age, culture or wealth"). Most open spaces do include seating, but far too often it is of the wrong kind in the wrong place. One can't help wondering if such seating has been installed because it fills a gap on the designer's plan; with the choice of seating being chosen for ease of maintenance rather than comfort or potential usage.

According to Whyte (1980), successful open spaces have many and different kinds of users and they are places in which various kinds of activities occur. Based

on Gehl (1987) study, good seating arrangements in open spaces are of primary importance and spending time at open spaces is possible only when places with seating opportunities exist.

Good seating opportunities enable numerous activities such as: studying, eating, reading, sleeping, watching people and talking; and these make open spaces attractive to people (Gehl, 1987). Therefore, seating which enable these activities is vital to increase the quality of open spaces.

According to the most important key aspects of the urban design, “places for the people” and based on importance of the open space in the university campus for create attractive and useful sitting area in public place, this is very important to find the factors that affect learning by sitting intention in open space. This study attempted to find these factors based on theory of reasoned action (TRA).

1.3 Research Question

This study intended to answer the following questions:

- RQ-1. Do attitude, subjective norm affect the intention of sitting in open spaces at university campus?
- RQ-2. What are the factors affecting attitude to intention to sitting in open spaces at university campus? Do comfort, safety, and accessibility affect the attitude?

1.4 Aims and Objectives

The aim of this study is to investigate the factors (as show in the research questions section above) that affect learning of sitting intention in open spaces at university campus (case study Universiti Teknologi Malaysia) based on theory of reasoned action (TRA).

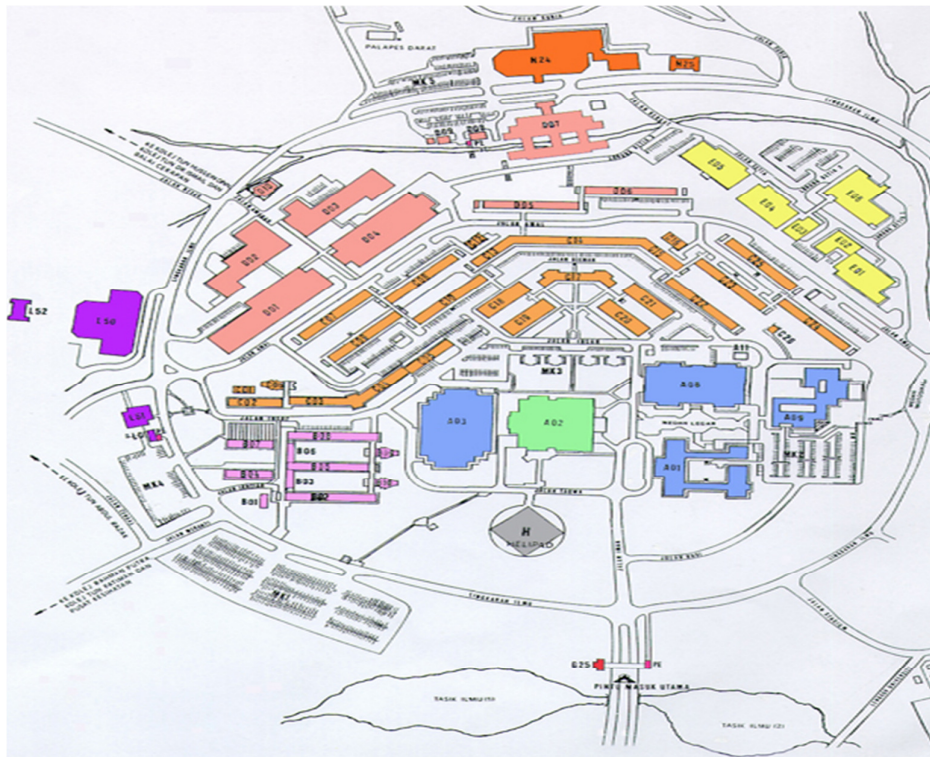
1. To examine whether the factors i.e. comfort, safety, and accessibility has any affect on the attitude towards sitting in open spaces at university campus.
2. To examine whether the subjective norm has any effect sitting on sitting intention in open spaces at university campus.

1.5 Scope of the Study

This study focuses only on public university campus. The main reason of selecting a public university is the availability of land for development of sitting opportunities compared to private universities. The study will only investigate spatial distribution and physical characteristic of sitting areas. The site, which was selected for the study area, is University Teknologi Malaysai (UTM) campus that located in Johor Bahru, Johor. Among public universities in Malaysia, UTM was selected. The main reason was, UTM recognized as sustainable university campus among public universities in Malaysia. According to UTM (website 2011) the most important features for UTM to achieve this title were for provided conducive spaces and environment for students learning and staff working. Therefore, this study examined what are the type of elements and structure of every open space in campus, which

characterized the seating in open spaces. The research also investigated the intention of students on sitting in open spaces. Figure 1.1 indicates scope of this study. According to figure 1.1 the zones that selected were the academic core areas. It means that the scope of this study were the academic core areas that stated from C1 to C25 plus the areas around the library building A1 to A3.

Figure 1.1 Study Scope



1.6 Significant of the Study

This study will be a significant endeavour in finding factors that affect sitting behaviour in university campus open spaces. This study makes proper opportunity

for the designer and architecture to help them to propagate design ideas for improvement of these spaces.

Documenting the significances the factors affect sitting intention in the open spaces in university campus, make proper opportunity for the urban designer to help them to propagate design ideas for improvement of these spaces. It will also provide and develop the area of the visual knowledge base on the photographs to illustrate the activities that happen in the university campus open spaces especially in the sitting area.

The study has explored the important role of open space, and factors affect sitting intention in the university campus, and how students perceived the important factors to sitting in the open spaces. Survey questionnaire that has been conducted prove that the factors affect sitting intention in open spaces based on the theory of reasoned action (TRA).

1.7 Organization of the Report

This study includes five chapters. Chapter one consist of the introduction of the study, statement of the problems, the research objectives, the purpose, the scope of the study, and the significance of the study. Chapter two reviews the public and open space literature, outlines the meaning and function of the public and open space, and the sitting in the university campus open space. Chapter three indicates the research methodology which describes the sampling design, instruments of the research, method of data collecting and statistical testing and analysis develop the research framework. Chapter four will discuss the results of the study. The final chapter is chapter five. It presents the discussion of the results, and highlights the implications of the results, limitation of the study and recommendations for future research.

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