

**UNIVERSITI TEKNOLOGI MARA**

**BEHAVIOURAL SEQUELA OF  
SMARTPHONES USAGE AMONG  
SECONDARY SCHOOL STUDENTS  
IN MALAYSIA**

**MOHD ZDIKRI BIN MD SABRON**

Thesis submitted in fulfillment  
of the requirements for the degree of  
**Doctor of Philosophy**  
**(Administrative Science)**

**Faculty of Administrative Science & Policy Studies**

**July 2023**

## ABSTRACT

The study aimed to investigate the impact of smartphone usage on the behavioural sequela of secondary school students in Malaysia. Despite existing literature on the topic, gaps still existed, particularly within the context of secondary schools in Malaysia. A causal design was used to examine the factors associated with smartphone usage among school students. Five research objectives and research questions were developed to address the issues studied, and data were collected from 862 respondents for quantitative findings and ten participants for the qualitative approach at five public schools in Malaysia. The results revealed that a positive attitude towards smartphone usage was strongly linked with actual behaviour among secondary school students. The environment of smartphones played a significant role in influencing behaviour intention through the mediating effect of attitude. Additionally, the social influence of smartphones had a positive and significant direct effect on behaviour intention through the mediating effect of attitude. The qualitative findings showed that behaviour intention was a factor that influenced students' smartphone usage. The overall result indicated that the environment was the key factor driving students to adopt smartphone technology. The study contributed to multiple theoretical perspectives, including the Technology Acceptance Model (TAM), Theory of Reasoned Action (TRA) and Theory of Planned Behaviour (TPB), Self-Determination Theory (SDT), Social Cognitive Theory (SCT), and Uses and Gratifications Theory (UGT). The study's significance lay in its contribution to the practical perspective in the education and policy field, government, academic institutions, schools, parents, society, students, and Parent-Teacher Association (PTA). A mixed-method approach was used to collect both quantitative and qualitative data, validated instruments were used to measure the constructs of interest and different theoretical frameworks were used to investigate the underlying mechanisms driving problematic smartphone usage. These methodological contributions provided a comprehensive understanding of the behavioural sequela of smartphone usage among secondary school students and informed the development of effective interventions.

**Key Words:** Secondary School Students; Smartphone; Behavioural Sequela;

## ACKNOWLEDGEMENT

The journey of completing this research was very challenging. However, the strength and ability granted to me by the Almighty Allah S.W.T, with His blessing, allowed me to complete this study. Moreover, the close monitoring of my research progress and guidance from my supervisor, Prof Ts Dr Hajah Rugayah Haji Hashim, co-supervisor Dr Aida Abdullah, and Dr Nurshamshida Md Shamsudin kept me motivated and enthusiastic to complete this research. I am intensely indebted and genuinely thankful to my supervisory team for making me think that nothing is impossible and difficult to achieve, along with the research progress. I must not forget my former main supervisor, Dr Aliza Abu Hassim, who had to resign due to health factors. All the knowledge imparted during the studies will not be forgotten, and I hope that she was given good health.

My dedication goes to all the students in SMK Bandar Banting (Selangor), SMK Kompleks KLIA (Negeri Sembilan), SMK Seri Medan (Johor), SMK Jengka 2 (Pahang), and SMK Pokok Sena (Penang) who cooperated and provided the data during both the pilot test and real test. I would like to give special thanks to the Ministry of Education Malaysia, JPN Selangor, JPN Negeri Sembilan, JPN Negeri Johor, JPN Pahang, and JPN Pulau Pinang, PPD Kuala Langat, PPD Seremban, PPD Batu Pahat, PPD Maran, and PPD Seberang Perai Utara who gave me a letter of approval to establish and conduct the courses of study.

I would also like to thank Dr Sarina Othman, Coordinator for Postgraduate Studies (Research), Dr Thenmolli Vadeveloo, Dr Asiyah Kassim, Head of Graduate Studies, the Dean Associate Prof Dr Nor Hafizah Mohamed Harith, and Administrative Staff, Faculty of Administrative Sciences and Policy Studies, Universiti Teknologi Mara (UiTM), who were responsible for running the programme for all PhD students to keep us constantly on track.

My most profound appreciation goes to my parents, ' and for their vision and determination to educate me. I extend my heartiest and warm thanks to my lovely wife, and my sons, and daughter for their continuous inspiration and prayers throughout this journey. Lastly, I thank my employer, friends, and those who indirectly contributed to this study. Your kindness means a lot to me, and I love you for your constant support.

Thank you.

## TABLE OF CONTENT

	<b>Page</b>
<b>CONFIRMATION BY PANEL OF EXAMINERS</b>	<b>ii</b>
<b>AUTHOR'S DECLARATION</b>	<b>iii</b>
<b>ABSTRACT</b>	<b>iv</b>
<b>ACKNOWLEDGEMENT</b>	<b>v</b>
<b>TABLE OF CONTENTS</b>	<b>vi</b>
<b>LIST OF TABLES</b>	<b>xiii</b>
<b>LIST OF FIGURES</b>	<b>xvi</b>
<b>LIST OF PLATES</b>	<b>xvii</b>
<b>CHAPTER ONE INTRODUCTION</b>	<b>1</b>
1.1 Introduction	1
1.2 Background of Study	1
1.3 Problem Statement	2
1.4 Research Objectives	3
1.5 Research Questions	3
1.6 Scope of the Study	4
1.7 Significance of Study	5
1.7.1 Theoretical Perspective	8
1.7.2 Practical Perspective	9
<i>1.7.2.1 Education Field</i>	10
<i>1.7.2.2 Policies Field</i>	11
<i>1.7.2.3 Government</i>	12
<i>1.7.2.4 Academic</i>	13
<i>1.7.2.5 School</i>	13
<i>1.7.2.6 Parents</i>	14
<i>1.7.2.7 Society</i>	15
<i>1.7.2.8 Students</i>	15
<i>1.7.2.9 Parent-Teacher Association (PTA)</i>	16

1.7.3	Methodological Contributions	17
1.8	Definition of Term	18
1.8.1	Environment	18
1.8.2	Personal	19
1.8.3	Behaviour	20
1.8.4	Social Influence	20
1.8.5	Perceived Usefulness	20
1.8.6	Perceived Ease-of-Use	21
1.8.7	Behaviour Intention	22
1.8.8	Attitude	23
1.8.9	Humanizing Technology	23
1.8.10	Secondary School Students	24
1.9	Limitations of the Study	24
1.10	Organizational of Chapter	25
1.11	Chapter Summary	26
 <b>CHAPTER TWO LITERATURE REVIEW</b>		<b>27</b>
2.1	Introduction	27
2.1.1	Theoretical Foundation for The Study	28
2.1.1.1	Technology Acceptance Model (TAM)	28
2.1.1.2	Theory of Reasoned Action (TRA) and Theory of Planned Behaviour (TPB)	32
2.1.1.3	Self- Determination Theory (SDT)	33
2.1.1.4	Social Cognitive Theory (SCT)	35
2.1.1.5	Uses and Gratifications Theory (UGT)	37
2.2	In-Depth Analysis of Applicable Paths	39
2.2.1	Smartphone Revolution	40
2.2.2	The Transitional Phenomena of Smartphone Usage	42
2.2.3	Smartphone Usage and Its Advantages	45
2.2.4	The Adverse Effects of Smartphone Usage	48
2.2.5	Smartphone Addiction among School Student	54
2.2.5.1	The Adverse Effects of Excessive Smartphone Usage on Mental and Physical Well-Being	56