

UNIVERSITI TEKNOLOGI MARA

**ADOPTION OF BIG DATA
ANALYTICS (BDA)
WITHIN ACCOUNTING
EDUCATION:
INSIGHTS FROM MALAYSIAN
UNIVERSITIES**

**NUR INSYIRAH
BINTI MOHAMED SUFIAN**

MSc

November 2024

ABSTRACT

It is crucial for future accountants to be well equipped with Big Data knowledge and skills to enable them to facilitate data-driven decision-making processes. Universities need to ensure that future accountants are well prepared for employment by incorporating Big Data Analytics (BDA) within their accounting curriculum. However, knowledge on the adoption of BDA within universities is still largely unexplored particularly in Malaysia. Further investigation is needed to determine the specific BDA knowledge and skills to be included in university accounting curriculum. Additionally, there is a need to investigate the specific challenges that hinder the effective adoption of BDA among universities. Therefore, the main objective of this research is to generate insights into the BDA adoption process, knowledge and skills required as well as challenges faced by selected universities in Malaysia. Data was collected using semi-structured interviews with eleven educators from public and private universities as well as five accounting practitioners. The data was analysed using thematic analysis and facilitated by Atlas.ti software. Key findings indicate that all selected public universities have progressed in their adoption stages while the private universities experience little or no adoption. Furthermore, foundation level BDA knowledge and related software are essential for future accountants. Finally, three main challenges were identified consisting of lack of expertise, the need for continuous updating and theory-practice gap. This research has several implications. It provides current evidence on the adoption of BDA within accounting curriculum that contributes to the body of knowledge by using Rogers Diffusion of Innovation Theory.

ACKNOWLEDGEMENT

Alhamdulillah, I praise and thank Allah SWT for His greatness and for giving me the strength and courage to complete this thesis.

I would like to express my deepest gratitude to Associate Professor Dr. Eley Suzana Kasim for her invaluable guidance and support throughout my research. Her expertise, insightful feedback, and unwavering encouragement have been instrumental in shaping the direction and quality of this work. Her dedication to excellence and commitment to fostering a supportive and intellectually stimulating environment have greatly enhanced my academic journey. I am profoundly appreciative of her mentorship and the opportunity to learn under her supervision. One simply could not wish for a better or friendlier supervisor.

This has been a long journey for me. Alhamdulillah, I have learned a lot throughout this journey of ups and downs on all laughter and tears that were shaped me now. Most importantly, I have learned to be grateful enough for having the whole family on my side that always push me to do what that I want and capable to. I extend my heartfelt gratitude to my loving husband, Hafizz, whose unwavering support, encouragement, and understanding have been instrumental in making this journey possible. To my wonderful sons, Danial and Iman, your patience and understanding during my dedicated hours of work are deeply appreciated. I am also indebted to my cherished family and my supportive family-in-law, whose constant encouragement and belief in my abilities have been a constant source of motivation. Your do'a (prayers), love and encouragement have played an essential role in my academic pursuits, and for that, I am truly thankful.

In memory of my beloved late father, whose enduring wisdom, boundless love, and unwavering belief in my potential continue to inspire me. Though he is no longer with us, his guidance and encouragement remain a guiding light throughout this academic endeavour. His legacy lives on in every word written and every achievement earned, forever shaping the path I tread. May he always be rest in peace. Al-Fatihah.

TABLE OF CONTENTS

	Page
CONFIRMATION BY PANEL OF EXAMINERS	ii
AUTHOR'S DECLARATION	iii
ABSTRACT	iv
ACKNOWLEDGEMENTS	v
TABLE OF CONTENT	vi
LIST OF TABLES	x
LIST OF FIGURES	xi
LIST OF ABBREVIATIONS	xii
CHAPTER 1 INTRODUCTION	1
1.1 Background of Study	1
1.2 Statement of Problem	5
1.3 Significance of the Study	8
1.4 Research Questions and Research Objectives	9
1.4.1 Main Objective	9
1.5 Scope of the Study	10
1.6 Definition of Terms	10
1.7 Organisation of Dissertation	11
1.8 Summary of Chapter	12
CHAPTER 2 LITERATURE REVIEW AND THEORETICAL FRAMEWORK	13
2.1 Introduction	13
2.2 Big Data	13
2.3 Big Data Analytics	17
2.3.1 Big Data Analytics within Accounting Profession	18

CHAPTER 1

INTRODUCTION

1.1 Background of Study

Industrial Revolution (IR) 4.0 signifies the development of data transformation towards cutting-edge digital technologies in today's world. IR4.0 is expected to change how we do things as we live- from working to and communicating. These changes in every day actions will subsequently also bring about change to business models and trends in employment. According to the World Economic Forum's Future of Jobs Report 2023, Big Data Analytics (BDA), is one of the biggest drivers of job growth, as there is a significant growth in the volume of global data being created, captured, copied, and consumed. Global data creation is projected to grow rapidly reaching 180 zettabytes in 2025 (Taylor, 2022; Younis, 2022). Automation and artificial intelligence are change agents in IR4.0 that will replace existing employees with new workers that have the crucial skills, or with machines that perform the job at a fraction of the original cost. Previously, data was collected and analysed using traditional analysis tools and software for decision-making purposes. However due to drastic change in business organizations, these traditional analysis tools are no longer applicable in today's environment (Porath, 2023). One of the drastic changes discussed includes the availability of Big Data (Yassine et al., 2019). The generation of massive data has started to outperform the processing capabilities of traditional analytical tools.

In recent years, the organisation depends on sophisticated business processes and analytics in order to be competitive in the global market (Cadden et al., 2023; Abbasi et al., 2016). This development is characterized by a huge amount of data produced which is expected to continue growing at an exponential rate due to the availability of Big Data. Big Data represents a high volume of data with different data types accumulating at a rapid velocity (Pramanik, & Bandyopadhyay, 2023). Big Data is not just "extra" data - it is also massive, mixed and very unstructured. Nowadays companies need to leverage on voluminous structured, unstructured, and semi-structured data to find the unique patterns on the different customer behaviour. (Mukherjee, 2023). Big Data reshapes organizations' operations in its technology, business process and how data is being analysed - hence the use of Big Data Analytics