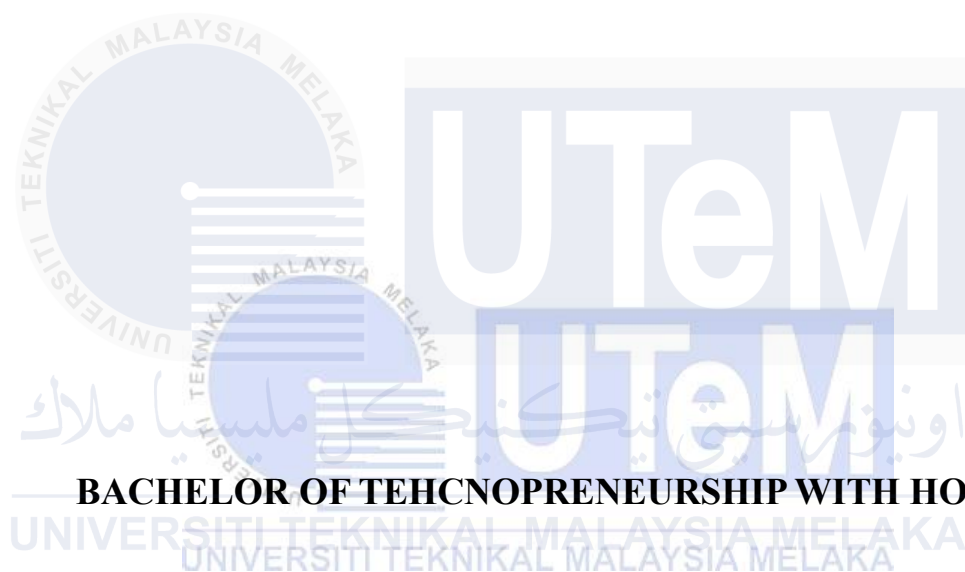


## **FINAL YEAR PROJECT REPORT**

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**BACHELOR OF TEHCNOPRENEURSHIP WITH HONOUR'S  
(BTEC)**

**UNIVERSITI TEKNIKAL MALAYSIA, MELAKA**

**(UTeM)**

**2025**

**‘I/We hereby acknowledge that we have read this work, and, in our opinion, it is adequate in terms of scope and quality for the purpose of awarding the degree of Bachelor of Technopreneurship with Honors’**

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**Date: 2 February 2025**



**THE ROLE OF EMOTIONAL INTELLIGENCE IN  
ENTREPRENEURIAL LEADERSHIP AMONG STUDENT  
ENTREPRENEUR AT UNIVERSITY TECHNICAL MALAYSIA,  
MALACCA (UTeM)**

A project report submitted in fulfilment of the requirement for the award of a  
Bachelor of Technology Entrepreneurship with Honours (BTEC) With Honours  
Faculty Of Technology Management and Technopreneurship

By

FATIN ADRIANA FITRI BINTI MUHAMMAD SUKRI

UNIVERSITI TEKNIKAL MALAYSIA MELAKA

2025

## DECLARATION

I hereby declare that this thesis with the title ‘THE ROLE OF EMOTIONAL INTELLIGENCE IN ENTREPRENEUR LEADERSHIP AMONG STUDENT ENTREPRENEUR AT UTeM’ is the result of my own research except as cited in the references.

Signature:

Name: FATIN ADRIANA FITRI BINTI MUHAMMAD SUKRI

Matric No:

Date: 2 February 2025



## DEDICATION

I dedicate this work to those whose unwavering support and guidance have been the cornerstone of my academic journey. To Professor Datuk Dr Izaidin bin Abdul Majid our mentorship, profound insights, and unwavering encouragement have not only shaped the trajectory of this project but also enriched my understanding of the subject matter. Your dedication to excellence and belief in my capabilities have inspired me every step of the way. I am deeply grateful to my esteemed panel's Dr Yusri bin Arshad for their invaluable feedback, constructive criticism, and scholarly guidance throughout the development of this study. Your expertise and commitment to academic rigor have played a pivotal role in refining my research methodology and enhancing the quality of my work. To my beloved parents, Mr Muhammad Sukri Bin Mat Isa, Mrs Zainab Binti Shafie and other siblings your unconditional love, unwavering support, and endless sacrifices have been the bedrock of my academic pursuits. Your belief in my aspirations and relentless encouragement have fuelled my determination to strive for excellence. To my partner Muhammad Ikmal Sulaiman, your patience, understanding and constant motivation have kept me focused and inspired to achieve my goals. And to my dear friends, Hana, Hanani, Lidiya, Auni and Zulfaqar who have stood by me with encouragement, understanding, and countless late-night discussions, your friendship has brought joy and camaraderie to every phase of this endeavour. Your unwavering belief in me has been a source of strength and motivation. This project is dedicated to each of you with profound gratitude and appreciation for your profound impact on my academic and personal growth.

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## ABSTRACT

This research investigates the role of emotional intelligence (EI) among student entrepreneurs at Universiti Teknikal Malaysia Melaka (UTeM). The study aims to assess the relationship between EI and entrepreneurial leadership, focusing on how entrepreneurial activity status, educational exposure, and family involvement influence EI development. A survey-based approach was adopted, with data collected using a structured questionnaire. The findings reveal that EI significantly enhances students' ability to manage emotions, build resilience, and foster effective decision-making, all of which are critical for entrepreneurial success. Furthermore, exposure to entrepreneurial education and family involvement were found to have a positive impact on EI. The research underscores the importance of integrating EI training into academic curricula and creating support systems to nurture student entrepreneurs. These insights provide a foundation for future studies and practical recommendations to enhance entrepreneurial outcomes through emotional intelligence development.

*Keywords: Emotional Intelligence (EI), Entrepreneurial Leadership (EL) , Student Entrepreneurs, University Technical Malaysia, Melaka (UTeM).*

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## LIST OF ABBREVIATION

$$n = \frac{x^2 N p (1-p)}{e^2 (N-1) + x^2 p (1-p)}$$

n = Sample size required

N= Population Size

e = acceptable sampling error

$x^2$ = chi-square of degree of freedom 1 and confidence 95% 3.841.

p= proportion of population (0.05)

$\alpha$  = beta

< = Less Than

> = Greater Than

$\leq$  = Less Than or Equal To

$\geq$  = Greater Than or Equal To

$\pm$  = Plus Minus

$$Y = a + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + b_5X_5$$

Where:

Y	Dependent variable (Entrepreneurial Leadership)
a	Constant
b <sub>1</sub>	Influence of X <sub>1</sub> (Self-Awareness)
b <sub>2</sub>	Influence of X <sub>2</sub> (Self-Regulation)
b <sub>3</sub>	Influence of X <sub>3</sub> (Social Awareness)
b <sub>4</sub>	Influence of X <sub>4</sub> (Relationship Management)
X <sub>1</sub> X <sub>2</sub> X <sub>3</sub> X <sub>4</sub> X <sub>5</sub>	Independent Variables



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## CHAPTER 1

### INTRODUCTION

#### 1.0 Introduction

The first chapter provides an overview of the study, detailing its background, research purpose, key questions, and objectives. It also establishes the study's scope, limitations, and significance. This research examines the impact of emotional intelligence on entrepreneurial leadership among student entrepreneurs at Universiti Teknikal Malaysia, Melaka (UTeM). The primary objective is to evaluate how emotional intelligence contributes to the development and enhancement of leadership qualities in student entrepreneurs. Furthermore, the study aims to identify the most significant emotional intelligence traits and entrepreneurial leadership attributes exhibited by these individuals.

#### 1.1 Background of Study

In the fast-paced global economy of today, entrepreneurship plays a crucial role in driving innovation, economic growth, and job creation (Baumol, 2010). Recognizing the importance of fostering entrepreneurial thinking, universities have increasingly integrated entrepreneurship programs into their curricula (Zhang, Li, Zeng, Minqiang Zhang, & Li, 2022). These initiatives aim to equip students with the necessary skills and knowledge to navigate the complexities of launching and managing businesses. While technical expertise and financial literacy are vital, there is growing recognition that emotional intelligence (EI) is a key factor in the success of entrepreneurial leaders (Anamika Singh, Rajkiran Prabhakar & Jattoth Sai Kiran, 2022). Emotional intelligence, defined as the ability to recognize, understand, and regulate both personal and others' emotions, is particularly valuable in the high-pressure and unpredictable environments associated with entrepreneurship (Isabela Cornoda & Maria, 2023).

Although research on the connection between emotional intelligence and leadership is expanding, there remains a gap in understanding its specific influence on entrepreneurial leadership, particularly among student entrepreneurs (Munir & Rauf, 2019). As these students juggle academic commitments with the demands of business ownership, their ability to manage emotions and build strong interpersonal relationships becomes a crucial factor in their success (Illios, Moirira & Alexandre, 2019). This research seeks to analyze the relationship between emotional intelligence and entrepreneurial leadership among student entrepreneurs at Universiti Teknikal Malaysia, Melaka (UTeM). By examining the levels of emotional intelligence and leadership attributes in these students, the study aims to contribute to academic discussions and practical entrepreneurship education while identifying the most impactful EI components for leadership development.

The concept of emotional intelligence gained widespread attention in the mid-1990s following the publication of Daniel Goleman's groundbreaking book *Emotional Intelligence: Why It Can Matter More Than IQ* (Goleman, 1995). Goleman's research highlighted that emotional and social skills could surpass traditional cognitive abilities in shaping performance, particularly in leadership roles (Goleman, 1998). Building upon the foundational work of psychologists Peter Salovey and John Mayer, who introduced the term "emotional intelligence" in 1990, Goleman proposed a model outlining five core EI components: self-awareness, self-regulation, motivation, empathy, and social skills (Salovey & Mayer, 1990). Over the past few decades, this framework has been extensively adopted in both academic research and practical applications, broadening the understanding of emotional intelligence's significance across various aspects of personal and professional life (Bushra, 2024).

Several studies have demonstrated a strong link between high emotional intelligence and effective leadership performance (Côté, Lopes, Salovey, & Miners, 2010). Leaders with well-developed emotional intelligence are adept at managing their own emotions, understanding the emotions of others, and fostering productive, collaborative relationships within their teams (Humphrey, 2018). These capabilities are particularly essential in entrepreneurial settings, where leaders frequently encounter high stress, uncertainty, and the need to inspire and motivate individuals despite limited resources (Boyatzis, 2022). Research suggests that entrepreneurial leaders with strong emotional

intelligence are more likely to succeed in developing innovative products, maintaining cohesive teams, and navigating the challenges of business growth and expansion (Miao, Humphrey, & Qian, 2018).

The study of entrepreneurship has evolved considerably over the years. Traditionally, it was primarily viewed through an economic lens, focusing on business creation and the role of entrepreneurs as agents of economic change (Gubik, 2019). However, more recent research has expanded this perspective to include the psychological and behavioral aspects of entrepreneurship, emphasizing the characteristics and skills that drive entrepreneurial success (Kuratko & Hornsby, 2007). Emotional intelligence has become a key area of interest within this broader exploration, with scholars examining its role in decision-making, risk-taking, and leadership effectiveness in entrepreneurial contexts (Zampetakis et al., 2009).

At institutions like Universiti Teknikal Malaysia, Melaka (UTeM), entrepreneurship programs have become an integral part of academic efforts to encourage innovation and economic progress. These programs not only equip students with technical and business knowledge but also emphasize the importance of soft skills, including emotional intelligence, which are essential for strong leadership. Despite this, there is limited research on how these soft skills, particularly emotional intelligence, impact the leadership capabilities of student entrepreneurs (Jane & Kerstine, 2023). This study aims to bridge this knowledge gap by exploring how emotional intelligence shapes entrepreneurial leadership among UTeM students, ultimately providing insights that could help improve the effectiveness of entrepreneurship education programs.

## 1.2 Problem Statement

While extensive studies have explored the role of emotional intelligence (EI) in leadership, its direct effect on entrepreneurial leadership, particularly among student entrepreneurs, remains insufficiently examined. Emotional intelligence has been shown to enhance decision-making, team management, and stress regulation in traditional leadership settings (Isabel Coronado & Maria, 2023). However, student entrepreneurs encounter unique challenges, as they must juggle academic obligations alongside the demands of launching and managing new businesses. This distinct environment suggests that EI may influence their leadership development in different ways.

Although the significance of EI in entrepreneurship is increasingly acknowledged, there is still a lack of research specifically analyzing its role in entrepreneurial leadership. Lluna Maria et al. (2021) emphasize the necessity of focused studies on EI within entrepreneurial contexts, arguing that entrepreneurship presents unique challenges requiring a different application of EI compared to general leadership settings.

The dual burden of academic responsibilities and business management faced by student entrepreneurs highlights the need for a deeper examination of how EI affects their leadership skills. Kotsou et al. (2019) stress the importance of investigating the role of EI in entrepreneurship, particularly among students who navigate distinct stressors and obligations. While elements of EI, such as self-awareness and relationship management, are recognized as influential in leadership, their precise impact on entrepreneurial leadership remains unclear. Miao, Humphrey, and Qian (2018) call for further research into how specific EI components contribute to success in entrepreneurial environments.

Furthermore, the lack of research on EI's impact on entrepreneurial leadership raises questions about the effectiveness of entrepreneurship education programs. Kuratko and Hornsby (2020) advocate for integrating EI into these programs to better prepare students for the challenges of entrepreneurship. Consequently, this study aims to bridge the existing research gap by exploring the relationship between EI and entrepreneurial leadership among student entrepreneurs. The findings will provide insights that enhance

both theoretical understanding and practical applications within entrepreneurship education.

Despite the well-established connection between EI and leadership, there remains a pressing need to investigate its role in entrepreneurial leadership among UTeM student entrepreneurs. Previous research has predominantly focused on leadership in general, overlooking the complexities of EI within the entrepreneurial leadership of students. Additionally, there is a lack of empirical data on the EI and entrepreneurial leadership (EL) levels among UTeM student entrepreneurs, as well as an insufficient understanding of which specific EI components—such as self-awareness, self-regulation, social awareness, and relationship management—are most effective.

To address this gap, this study will examine the influence of EI on entrepreneurial leadership among UTeM students. It will assess current EI and EL levels, identify the most significant EI factors, and explore how EI contributes to enhancing entrepreneurial leadership capabilities.

### 1.3 Research Questions

This study to delve into the nuances of emotional intelligence and entrepreneurial leadership among student entrepreneurs at UTeM. Some of the questions to be addressed in this study include following.

- 1) What is the level of Emotional Intelligence (EI) among student entrepreneurs?
- 2) What is the level of Entrepreneurial Leadership (EL) among student entrepreneurs?
- 3) Among the specific Emotional Intelligence (EI) factors such as self-awareness, self-regulation, social awareness and relationship management, which factors has the highest effectiveness among student entrepreneurs?
- 4) Does Emotional Intelligence (EI) influence the Entrepreneurial Leadership (EL) capabilities of student entrepreneurs at University Technical Malaysia, Malacca.

### 1.4 Research Objective

The general objectives of this study are outlined below:

- 1) To determine the level of Emotional Intelligence (EI) among student entrepreneurs.
- 2) To determine the level of Entrepreneurial Leadership (EL) among student entrepreneurs.
- 3) To evaluate which Emotional Intelligence (EI) factor—self-awareness, self-regulation, social awareness, and relationship management—is most beneficial among student entrepreneurs.
- 4) To examine the impact of Emotional Intelligence (EI) on the Entrepreneurial Leadership (EL) skills of UTeM student entrepreneurs.

## **1.5 Definition of Key Terms**

### **1.5.1 University Technical Malaysia, Melaka**

University Technical Malaysia, Melaka (UTeM), is a technical university located in Malacca, Malaysia. It offers a range of technical and engineering programs at undergraduate and postgraduate levels. UTeM is known for its focus on technology, innovation, and industry-relevant education, preparing students for careers in various technical fields.

### **1.5.2 Student Entrepreneur**

A student entrepreneur is not merely someone enrolled in entrepreneurship courses at a university but an individual actively engaged in innovative and revenue-generating entrepreneurial ventures.

### **1.5.3 Emotional Intelligence**

Emotional intelligence refers to an individual's ability to manage their own emotions while also understanding the emotions of others. It is measured through key components, including self-awareness, self-regulation, social awareness, and relationship management.

### **1.5.4 Entrepreneurial Leadership**

Entrepreneurial leadership affects and directs employee performance towards organisational goals by recognising and utilising entrepreneurial possibilities (Renko, 2015). The related with student entrepreneurs, where they much like organizational leaders, must navigate the challenges of entrepreneurship while inspiring and mobilizing their teams towards shared goals. They help find and seize academic and commercial entrepreneurial prospects.



## 1.6 Scope of Study

This study seeks to investigate the impact of emotional intelligence on the leadership capabilities of student entrepreneurs at Universiti Teknikal Malaysia, Melaka (UTeM). It will evaluate emotional intelligence levels and analyze their influence on leadership effectiveness within the UTeM environment. The participants will include student entrepreneurs at UTeM, not only those enrolled in entrepreneurship courses but also those actively managing businesses, both on and off campus.

## 1.7 Limitation of the Study

Two constraints are anticipated in this study. Firstly, due to the focus just on student entrepreneurs at University Technical Malaysia, Melaka (UTeM), the sample size may be limited, potentially lacking in diversity. Secondly, the time allocated for data collection is constrained to 24 weeks, requiring efficient time management alongside other academic commitments.

## 1.8 Significance of the Study

This study may help us understand how emotional intelligence affects leadership among UTM student entrepreneurs. The study may determine the amount of Emotional Intelligence variables that greatly impact Entrepreneurial Leadership among targeted respondents by determining the essential determinants to entrepreneurial success. The study's findings can also advance entrepreneurial and leadership research in academia and practice.

## 1.9 Summary

In this chapter, the researcher focuses on analyzing the impact of emotional intelligence on entrepreneurial leadership among student entrepreneurs at UTeM while identifying the most significant EI component in shaping entrepreneurial leadership.

## CHAPTER 2

### LITERATURE REVIEW

#### 2.0 Introduction

This chapter explores established concepts, key factors, solutions, and expert insights within the field of study. By synthesizing existing research and findings, a well-structured conceptual framework is developed. This framework integrates relevant variables and assesses their significance, providing a comprehensive foundation for the current research.

#### 2.1 Student Entrepreneur

Entrepreneurs are defined in various ways throughout the literature, and the same applies to student entrepreneurs, though their definitions tend to be less precise. Some view themselves as "dream merchants" (Purewell, 2001), while others are described as individuals who "build emerging businesses rather than extending and defending existing ones" (Baghai, Coley, & White, 2000). In some cases, they are referred to as "academic entrepreneurs"; however, most studies on academic entrepreneurship focus on faculty members engaged in entrepreneurial activities rather than students (Bercoritz & Feldman, 2008). Despite extensive research on academic entrepreneurship, faculty members pursuing entrepreneurial ventures represent a relatively small phenomenon compared to the large number of student entrepreneurs nurtured within university environments, many of whom continue to develop their businesses in collaboration with their institutions after graduation.

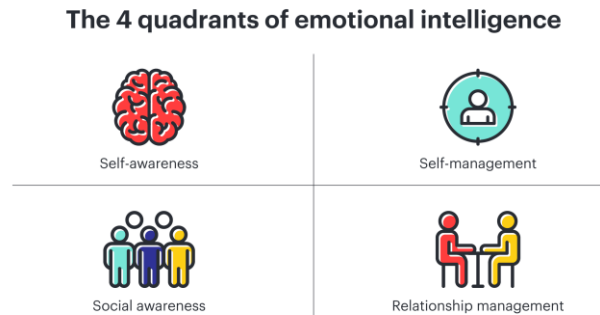
This study takes a different approach by examining student entrepreneurs not merely as participants in entrepreneurship courses but as individuals actively managing businesses on or near campus while completing their formal education. Therefore, for the purpose of this research, a student entrepreneur is defined as a university student enrolled in entrepreneurship courses who is also engaged in innovative and revenue-generating entrepreneurial ventures.

## 2.2 Emotional Intelligence

Emotional intelligence has attracted significant attention in leadership literature, with numerous studies and articles in both academic and popular press focusing on its definition and importance. A key turning point in the popularization of emotional intelligence was Daniel Goleman's book, *\*Emotional Intelligence: Why It May Matter More than IQ\**, which brought the concept into mainstream awareness. This book, a New York Times bestseller, was featured on the cover of *\*Time\** magazine and received widespread acclaim from both scholars and the media.

Salovey and Mayer were the first to define emotional intelligence as a form of social intelligence, enabling individuals to monitor their own emotions and those of others to enhance communication and decision-making abilities. Their definition emphasized understanding and processing both personal emotions and the emotions of others to connect the emotional and rational parts of the brain.

In her 2022 research, *\*What is Emotional Intelligence\**, Cherry K. (2022) expanded the concept by asserting that emotional intelligence boosts individuals' ability to perceive, interpret, express, and regulate their own emotions as well as those of others, ultimately facilitating more effective communication and decision-making. Goleman further developed the concept by breaking emotional intelligence into four key components: (a) self-awareness, (b) self-management, (c) social awareness, and (d) relationship management.



**Figure 2.2**

*Theory of Emotional Intelligence were developed by psychologists John Mayer and Peter Salovey, this model defines emotional intelligence as the ability to perceive, understand, use, and manage emotions.*

According to Figure 2.2, the theory of emotional intelligence is explained as follows:

*a) Self-Awareness*

This component involves the recognition and understanding of one's own emotions, strengths, weaknesses, values, and goals. It serves as the foundation upon which the other components of emotional intelligence are built.

*b) Self-Regulation*

Self-regulation refers to the ability to control and manage one's emotions and impulses. It enables individuals to stay calm under pressure, adapt to changes, and maintain a sense of balance in their lives.

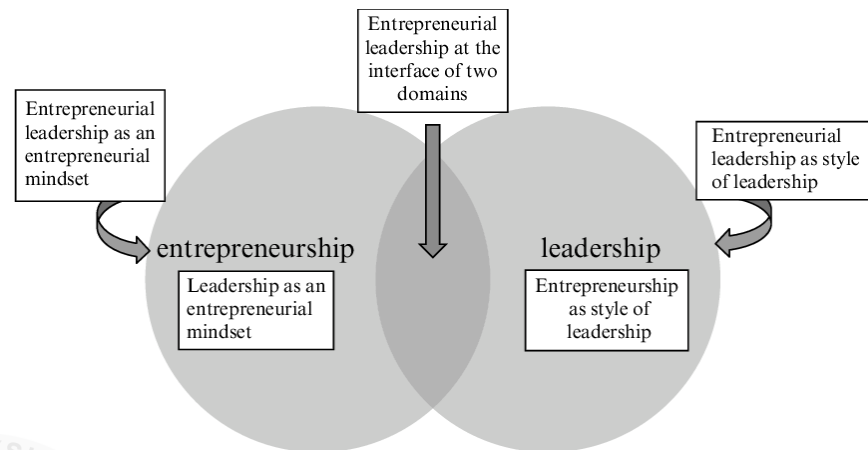
*c) Social Awareness*

Social awareness is the capacity to understand and empathize with the emotions of others. This skill helps in recognizing the emotional needs of those around you and responding appropriately to them.

*d) Relationship Management*

Relationship management is the ability to effectively manage relationships by utilizing empathy, communication, conflict resolution, and collaborative problem-solving. It plays a crucial role in building and maintaining healthy, positive connections with others.

### 2.3 Entrepreneurial Leadership



**Figure 2.3**

***Entrepreneurial Leadership Theory by Claire M. Leitch***

In the research by Claire M. Leitch (2018), three distinct perspectives on the relationship between entrepreneurship and leadership were identified (Leitch & Harrison, 2018). These perspectives include:

1. Entrepreneurship as a style of leadership (where leadership takes precedence),
2. Entrepreneurial leadership as an entrepreneurial mindset (where entrepreneurship takes precedence),
3. Entrepreneurial leadership as an intersection of both domains (Figure 1.1).

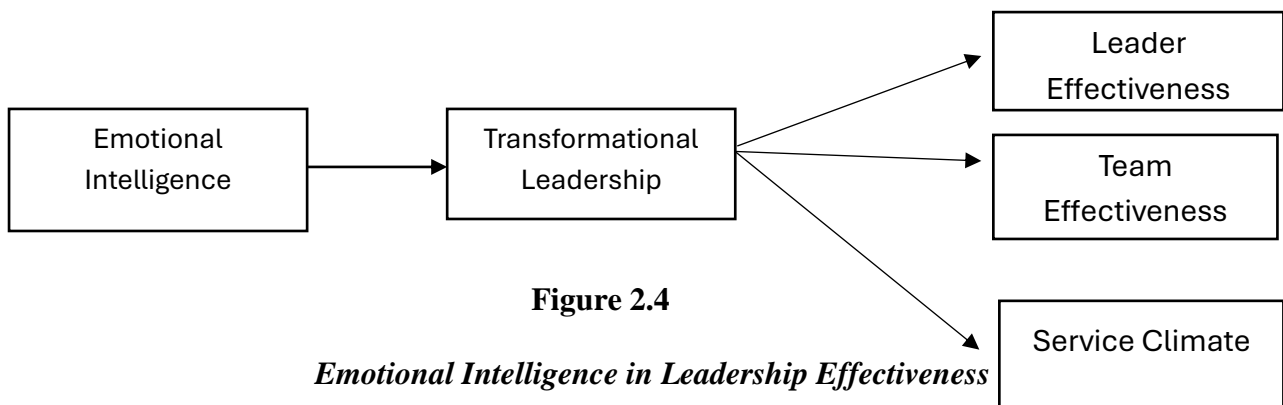
Viewing entrepreneurial leadership as a context-specific and situated form of leadership, entrepreneurship scholars argue that, in the early stages of business creation, founders must take the lead due to the lack of standardized operating procedures and management practices.

The success of businesses heavily relies on effective leadership skills within management, with entrepreneurial leadership being one of the key skills. Alvares and Barney (2002) describe entrepreneurial leadership as a type of leadership that focuses on actions toward establishing a business at the individual level and embracing innovation at the organizational level (Al Tuntas, 2014).

Entrepreneurial leadership combines leadership potential with an entrepreneurial spirit. When this blend of leadership and entrepreneurial drive is fully realized, it can significantly impact the direction of the business world (Kuru, 2016). Entrepreneurial leadership is defined as the ability to influence and guide employee performance towards organizational goals while identifying and leveraging entrepreneurial opportunities (Renko, 2015). While entrepreneurial leadership is related to entrepreneurship, it is not synonymous with it. It represents a new leadership model, where entrepreneurs typically focus on creating new initiatives, while entrepreneurial leaders actively seek opportunities beyond their new ventures (Greenberg, 2011).

In some instances, entrepreneurship and leadership are used interchangeably in the literature. This operational definition suggests that a leader also possesses entrepreneurial qualities (Gunduz, 2010). Entrepreneurial leaders are often positioned as sources of employment, speculation, and information (Bayrakdar, 2011). These leaders can take on both independent roles and guiding positions within organizations, which are complex systems (Gunduz, 2010). Through this operational definition, the study aims to offer a deeper understanding of the relationship between emotional intelligence and entrepreneurial leadership, particularly among student entrepreneurs.

## 2.4 Emotional Intelligence and Entrepreneurial Leadership



**Figure 2.4**

*Emotional Intelligence in Leadership Effectiveness*

*(Salovey & Mayer 1990)*

Emotional intelligence (EI) and leadership are deeply interconnected concepts that have attracted significant attention in both academic and practical contexts. Emotional intelligence refers to the ability to recognize, understand, and manage emotions effectively, both within oneself and in others (Salovey & Mayer, 1990). Leadership, conversely, involves the process of influencing, inspiring, and guiding individuals or groups toward achieving organizational objectives (Northouse, 2019). The link between emotional intelligence and leadership has been widely studied as researchers strive to understand how emotional intelligence can enhance leadership effectiveness.

Emotional intelligence has become a central focus in recent management research as a key determinant of leadership success. EI, often defined as the ability to perceive, understand, and regulate one's own emotions and those of others, is increasingly recognized as an essential skill for leaders in today's complex organizational environments. Emotionally intelligent leadership is seen as more than just a set of cognitive skills; it is widely acknowledged by both scholars and practitioners for its significant impact on leadership outcomes. Numerous studies have underscored the importance of emotional intelligence in fostering leadership effectiveness across various settings. Goleman (1998), in a landmark study, found that emotional intelligence competencies—such as self-awareness, self-regulation, empathy, and social skills—were more strongly correlated with leadership success than cognitive abilities alone. Similarly, Boyatzis et al. (2000) discovered that leaders with high emotional intelligence were more successful in motivating and inspiring their teams, which led to increased engagement and enhanced performance.

## **2.5 The Relationship between Emotional Intelligence Factors in Entrepreneurial Leadership**

Emotional intelligence (EI) encompasses a set of crucial skills that play a significant role in effective leadership. The four main components of EI—self-awareness, self-regulation, social awareness, and relationship management—are essential in helping leaders understand themselves and others, manage emotions, and build strong relationships within teams and organizations. Research consistently emphasizes the importance of these elements in enhancing leadership effectiveness across various contexts and industries. Leaders who possess high self-awareness can recognize and understand their emotions, strengths, and limitations. Studies indicate that self-aware leaders are more adept at managing interpersonal relationships, adapting their leadership styles to meet the needs of their teams, and making informed decisions (Day et al., 2004; Crossan et al., 2009).

Self-regulation refers to the ability to control emotions, impulses, and behaviors, particularly in challenging situations. Research shows that leaders with strong self-regulatory abilities are viewed as more credible and trustworthy, leading to higher levels of employee engagement and commitment (Joseph & Newman, 2010; Côté & Miners, 2006). Social awareness allows leaders to empathize with others and appreciate different viewpoints. Leaders with high social awareness are better able to anticipate and resolve conflicts within their teams, thereby fostering trust, collaboration, and mutual respect (Bono & Ilies, 2006; Rosete & Ciarrochi, 2005).

Research has demonstrated that leaders who excel in relationship management are more successful in navigating complex interpersonal dynamics, cultivating a culture of trust and openness, and guiding their teams to achieve organizational goals (Cherniss & Adler, 2000; George et al., 2000). In conclusion, research strongly supports the critical role of self-awareness, self-regulation, social awareness, and relationship management in leadership effectiveness. Leaders with high emotional intelligence are better equipped to understand themselves and others, regulate their emotions, and foster meaningful relationships, ultimately contributing to improved organizational performance and employee satisfaction.



## 2.6 The Relationship between Self-Awareness in Entrepreneurial Leadership

Self-awareness, a key component of emotional intelligence (EI), plays a pivotal role in effective leadership, especially in entrepreneurial settings. It involves a deep understanding of one's emotions, strengths, weaknesses, values, and motivations. This self-knowledge empowers leaders to make better decisions, communicate more effectively, and foster stronger relationships. In entrepreneurial leadership, self-awareness is crucial for recognizing opportunities, managing risks, and inspiring teams to pursue innovation and growth.

### *Self-Awareness and Entrepreneurial Leadership*

Entrepreneurial leadership is characterized by traits such as innovation, risk-taking, and business growth. As Renko et al. (2015) highlight, entrepreneurial leaders are proactive, visionary, and adaptable. They often operate in uncertain and dynamic environments, which necessitates a high degree of self-awareness. Leaders with strong self-awareness are better able to identify their limitations and seek out complementary skills and resources, enhancing their overall effectiveness.

Research by Carmeli and Tishler (2006) emphasizes the importance of self-awareness in entrepreneurial leadership. Their study found that self-aware leaders are more likely to engage in behaviors that promote innovation and improve organizational performance. This is because self-aware leaders tend to be more open to feedback, learn from their mistakes, and adjust their strategies in response to changing conditions, all of which contribute to sustained success.

### *The Role of Self-Awareness in Leadership*

Self-awareness is a foundational element of emotional intelligence, as defined by Goleman (1998). He describes it as the ability to recognize and understand one's emotions, moods, and motivations, as well as the ability to comprehend their impact on others. Leaders with strong self-awareness are typically confident, capable of making accurate self-assessments, and able to maintain a balanced perspective, including the ability to laugh at themselves when appropriate. These qualities enhance their resilience, improve communication, and strengthen their ability to manage stress—ultimately fostering their overall leadership effectiveness.

Several studies have explored the connection between self-awareness and leadership effectiveness. For instance, Tekleab et al. (2008) found a positive correlation between self-awareness among leaders and both team performance and overall leadership effectiveness. Leaders who are attuned to their strengths and weaknesses can leverage their strengths more effectively while addressing their weaknesses, leading to better team outcomes and more successful leadership overall.

A more recent study by Sharon, Hugh, and Karl (2021) further supports this relationship, demonstrating that self-awareness among leaders contributes to higher team performance and better decision-making. Leaders who are mindful of their personal capabilities and limitations are better positioned to lead effectively and foster high-performance teams.

### *Self-Awareness in Entrepreneurial Success*

In the realm of entrepreneurship, self-awareness is equally crucial. A study by Alexander NewMan (2019) published in the *Journal of Vocational Behavior* explored the role of self-awareness in entrepreneurial success. The findings revealed that self-aware entrepreneurs are more likely to establish successful ventures because they are better at recognizing and seizing opportunities, managing risks, and assembling effective teams. Moreover, self-awareness enables entrepreneurs to align their personal values and goals with their business strategies, resulting in greater satisfaction and a higher likelihood of achieving business success.

### *Implications for Student Entrepreneurs*

For student entrepreneurs, who are often navigating the complex terrain of balancing academic responsibilities with running a business, self-awareness is especially beneficial. Developing self-awareness allows these student entrepreneurs to better identify their personal strengths and areas for improvement. By gaining insights into their leadership abilities and emotional responses, they can refine their leadership approach, make more informed decisions, and build more effective teams. Ultimately, self-awareness equips student entrepreneurs to overcome the challenges of entrepreneurship with greater confidence and success, while enhancing their ability to adapt and thrive in an ever-changing business environment.

By fostering self-awareness, student entrepreneurs can not only enhance their leadership potential but also improve their overall entrepreneurial journey, leading to more successful ventures and a deeper sense of fulfillment in their entrepreneurial endeavors.

### **Hypothesis**

H1: Higher levels of self-awareness are positively associated with higher levels of entrepreneurial leadership among UTEM student entrepreneurs.

## 2.7 The Relationship between Self-Regulation in Entrepreneurial Leadership

Self-regulation, a key component of emotional intelligence (EI), plays an essential role in effective leadership, particularly in entrepreneurial environments. It refers to the ability to control and manage one's emotions, impulses, and behaviours in various situations, especially during periods of stress or uncertainty. In entrepreneurial leadership, self-regulation enables leaders to stay focused, remain resilient, and adapt to challenges, ensuring they can maintain control over their responses and make thoughtful decisions despite the pressures they may face.

### *The Role of Self-Regulation in Leadership*

Self-regulation is a foundational element of emotional intelligence, as described by Mayer and Salovey (1997). It involves the ability to manage one's emotions, impulses, and distractions while maintaining composure and rationality. Leaders with strong self-regulation skills are better equipped to handle stressful situations, think clearly under pressure, and make objective decisions. These attributes are vital for leadership success, particularly in dynamic and uncertain environments where effective decision-making and emotional stability are necessary.

Leaders who are skilled in self-regulation can also foster a positive work culture by setting a calm and composed example for their teams. They are less likely to be swayed by immediate emotional reactions, helping to maintain a stable and productive work environment. This ability to remain grounded allows them to make decisions that are more thoughtful and aligned with long-term goals, rather than reacting impulsively to short-term challenges.

### *Self-Regulation and Entrepreneurial Leadership*

Entrepreneurial leadership requires specific qualities such as resilience, adaptability, and the ability to take calculated risks. Entrepreneurs often face an array of challenges—financial setbacks, market uncertainties, and high levels of competition—making self-regulation an essential skill in navigating these obstacles. Self-regulated leaders can remain focused on their vision and objectives despite setbacks and distractions, which helps them steer their ventures toward success.

Research by Renko et al. (2015) underscores the importance of self-regulation in entrepreneurial leadership, noting that it plays a critical role in maintaining focus on long-term goals, overcoming failures, and persevering through adversity. Entrepreneurs who can regulate their emotions and responses are better equipped to learn from mistakes, adapt to changing circumstances, and continue working toward their business goals despite encountering setbacks.

#### *Impact of Self-Regulation on Entrepreneurial Success*

Self-regulation has been shown to have a positive impact on various dimensions of entrepreneurial leadership. A study by Baron and Tang (2011) found that self-regulation was a significant predictor of entrepreneurial behaviors and intentions among university students. The research highlighted that students with high levels of self-regulation were more likely to engage in proactive behaviors, exhibit persistence through challenges, and ultimately achieve greater success in their entrepreneurial ventures.

Self-regulation was linked to a higher likelihood of students pursuing entrepreneurial activities, even in the face of uncertainty. Entrepreneurs who possess strong self-regulation skills are more likely to take constructive actions that support the development of their ventures, such as networking, seeking advice, and refining their business strategies, all of which contribute to long-term success.

#### *Implications for Student Entrepreneurs*

For student entrepreneurs, self-regulation is a critical skill that can enhance both their leadership capabilities and entrepreneurial outcomes. Balancing academic responsibilities with the demands of running a business requires the ability to manage emotions, stay focused, and adapt to changing circumstances. By developing self-regulation, student entrepreneurs can maintain composure in challenging situations, make well-informed decisions, and persist through setbacks.

In the entrepreneurial context, self-regulated student entrepreneurs are better able to cope with the stresses of balancing schoolwork and business activities, which enhances their capacity for success in both academic and entrepreneurial endeavours. Additionally, by mastering self-regulation, student entrepreneurs can model emotional control and resilience for their teams, fostering a positive and productive work environment that supports their business goals.

In conclusion, self-regulation is a crucial component of emotional intelligence that significantly contributes to leadership effectiveness, particularly in entrepreneurial settings. By honing self-regulation skills, student entrepreneurs can enhance their ability to navigate challenges, lead effectively, and achieve success in their ventures.

### **Hypothesis**

H2: Higher levels of self-regulations are positively associated with higher levels of entrepreneurial leadership among UTEM student entrepreneurs.

## 2.8 The Relationship between Social Awareness in Entrepreneurial Leadership

Social awareness, a critical component of emotional intelligence (EI), involves the ability to perceive and understand the emotions, perspectives, and needs of others. In the realm of entrepreneurial leadership, social awareness is essential for building strong relationships, fostering collaboration, and identifying opportunities in the market. Leaders with high social awareness are able to navigate complex social dynamics, adapt to different cultural contexts, and effectively engage with various stakeholders, contributing significantly to their success.

### *The Role of Social Awareness in Leadership*

As defined by Mayer and Salovey (1997), social awareness is the capacity to recognize and understand the emotions of others. Leaders with high social awareness possess the ability to empathize with others, communicate effectively, and influence social situations in a constructive manner. These skills are particularly important in entrepreneurial leadership, where effective team dynamics and stakeholder relationships are vital for success.

Leaders with strong social awareness are often more adept at managing interpersonal relationships, fostering inclusivity, and creating an environment of trust and respect. By understanding the emotions and needs of their team members and customers, such leaders can anticipate problems, offer tailored solutions, and cultivate an atmosphere that promotes collaboration and mutual respect.

### *Social Awareness and Entrepreneurial Leadership*

Entrepreneurial leadership requires a deep understanding of the needs and perspectives of various stakeholders, including customers, employees, investors, and community members. Social awareness helps entrepreneurs gain insights into market trends, customer behaviors, and potential opportunities, which are crucial for the growth and success of a venture.

Research by Renko et al. (2015) highlighted the importance of social awareness in entrepreneurial leadership. The study emphasized that entrepreneurs who are socially aware are better equipped to identify customer needs, form strategic partnerships, and build alliances that are key to sustaining and expanding their businesses. Social awareness enables entrepreneurs to recognize the subtleties of social interactions and adapt their leadership strategies accordingly.

#### *Impact of Social Awareness on Entrepreneurial Leadership*

Empirical research has demonstrated that social awareness significantly influences entrepreneurial leadership and the success of entrepreneurial ventures. A study by Baron and Ward (2004) found that entrepreneurs who possess high social awareness excel in networking and forming valuable strategic alliances. These connections, in turn, provide access to critical resources, information, and opportunities, which contribute to the venture's growth and sustainability.

Similarly, research by Zhao and Seibert (2006) explored the role of social awareness in entrepreneurial team performance. The study revealed that leaders with high social awareness fostered better communication, coordination, and conflict resolution within teams. These skills were associated with higher levels of team performance and innovation, as teams led by socially aware entrepreneurs were more collaborative and cohesive in achieving business goals.

Moreover, Hmieleski and Carr (2007) conducted a study on the impact of social awareness on entrepreneurial opportunity recognition. The findings indicated that socially aware entrepreneurs were more skilled in identifying emerging trends and unmet customer needs. This ability to tune into market dynamics enabled them to develop innovative products and services that resonated with consumers, resulting in a competitive advantage and greater entrepreneurial success.



### *Implications for Practice*

The relationship between social awareness and entrepreneurial leadership has important implications for practice, particularly in the development of entrepreneurial skills. Educational institutions and organizations can foster social awareness among aspiring entrepreneurs through targeted training and development programs. These programs could include cross-cultural exposure, empathy-building exercises, and interpersonal communication training to enhance the social awareness capabilities of entrepreneurs.

By equipping entrepreneurs with the skills to understand the emotions and perspectives of others, these interventions can improve their ability to build strong relationships, collaborate effectively, and navigate diverse business environments. Social awareness will empower entrepreneurs to better serve their customers, develop stronger partnerships, and ultimately create more sustainable and successful ventures.

In conclusion, social awareness plays a crucial role in entrepreneurial leadership by facilitating effective communication, collaboration, and decision-making. Entrepreneurial leaders with high social awareness are better positioned to recognize market opportunities, address customer needs, and create innovative solutions, all of which are essential for the long-term success of their ventures.

### **Hypothesis**

H3: Higher levels of self-awareness are positively associated with higher levels of entrepreneurial leadership among UTEM student entrepreneurs.

## 2.9 The Relationship between Relationship Management in Entrepreneurial Leadership

Relationship management, an essential component of emotional intelligence (EI), plays a pivotal role in fostering healthy, productive relationships within organizations. This skill set includes abilities like effective communication, conflict resolution, collaboration, and networking, all of which are crucial in entrepreneurial leadership. In an entrepreneurial setting, strong relationship management skills enable leaders to inspire, motivate, and guide their teams, form strategic alliances, and navigate the complexities of business environments.

### *The Role of Relationship Management in Leadership*

Relationship management is a fundamental aspect of emotional intelligence, as it involves the ability to influence and manage emotions, both one's own and others'. Leaders with well-developed relationship management skills are able to engage constructively with individuals, resolve conflicts, and create a positive and supportive atmosphere within their teams. These leaders are adept at fostering trust, promoting cooperation, and ensuring smooth interactions, which are crucial for creating high-functioning, cohesive teams.

For entrepreneurs, the ability to manage relationships effectively extends beyond internal team dynamics and encompasses the broader ecosystem of stakeholders, including investors, customers, partners, and suppliers. Relationship management skills allow entrepreneurial leaders to build strong networks, establish valuable partnerships, and influence key individuals, which are essential for business growth and sustainability.

### *Relationship Management and Entrepreneurial Leadership*

Entrepreneurial leadership requires leaders to be strategic in their approach to relationship building. According to research by Renko et al. (2015), relationship management is critical for entrepreneurial success, as it enables leaders to manage complex relationships with stakeholders, navigate team dynamics, and foster collaboration. Entrepreneurs often rely on their ability to engage with others, form alliances, and create a supportive and cooperative environment, all of which are made possible through effective relationship management.

### *Research Evidence on Relationship Management and Entrepreneurial Leadership*

Several studies highlight the positive impact of relationship management on entrepreneurial leadership. A study by Brush et al. (2001) found that entrepreneurs with strong relationship management skills were more successful in securing funding, establishing partnerships, and expanding their business networks. These relationships provide entrepreneurs with access to vital resources, information, and expertise, all of which contribute to the growth and sustainability of their ventures.

Additionally, research by Baron and Markman (2003) emphasized the importance of social skills, including relationship management, in enhancing venture performance. Entrepreneurs who were skilled in relationship management were more successful in building trust with investors and securing the necessary resources to expand their businesses. The ability to develop and maintain these relationships was directly linked to higher success rates for their ventures.

Davidsson and Honig (2003) further explored the role of social capital in entrepreneurial success and found that entrepreneurs with strong relationship management skills were better positioned to leverage their social capital. This allowed them to access business opportunities, acquire resources, and improve overall venture performance.

### *Implications for Practice*

The importance of relationship management in entrepreneurial leadership suggests that educational institutions and organizations should invest in training programs aimed at enhancing these skills. By focusing on communication, conflict resolution, and networking, these programs can help aspiring entrepreneurs develop the abilities needed to build strong, sustainable relationships with key stakeholders. This in turn will help them succeed in their entrepreneurial endeavours and contribute to the long-term growth of their ventures.

By fostering relationship management skills, entrepreneurs can navigate the challenges of the business world more effectively. Strong relationships with team members, investors, and customers create a foundation for collaboration, resource acquisition, and strategic growth. As a result, enhancing relationship management within the context of entrepreneurial leadership is not only beneficial to individual leaders but also to the broader organizational ecosystem.

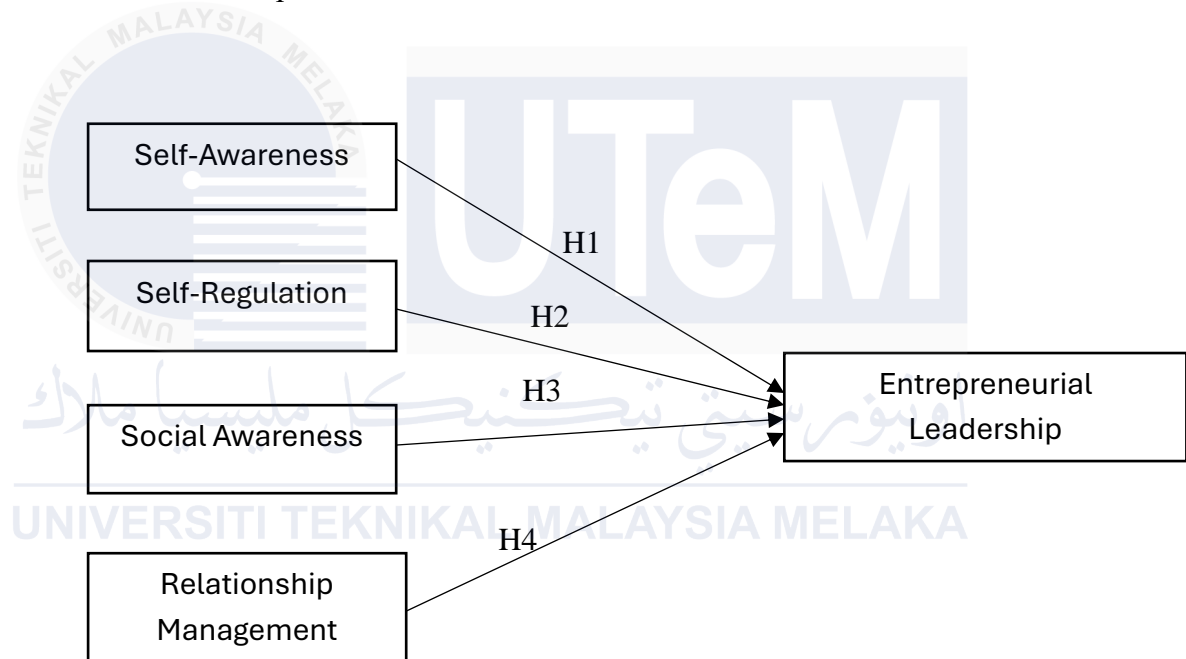
In conclusion, relationship management is integral to entrepreneurial leadership, enabling leaders to build trust, foster collaboration, and leverage networks for business success. Entrepreneurs who excel in relationship management are better positioned to secure resources, forge strategic partnerships, and create a positive, dynamic work environment that drives long-term success.

#### **Hypothesis**

H4: Higher levels of relationship management are positively associated with higher levels of entrepreneurial leadership among UTEM student entrepreneurs.

## 2.10 Research Framework

The model employed in this study integrates existing theories and previous research, as discussed earlier. It was created to investigate how emotional intelligence affects entrepreneurial leadership and to explore the relationship between different emotional intelligence factors and entrepreneurial leadership. This conceptual model focuses on the link between various emotional intelligence components and the effectiveness of entrepreneurial leadership among student entrepreneurs at Universiti Teknikal Malaysia, Melaka (UTeM). The study aims to understand how specific EI elements influence leadership abilities and outcomes in this context.



**Figure 2.10**  
*Conceptual Model*

## 2.11 Summary

In conclusion, emotional intelligence is essential in determining the effectiveness of entrepreneurial leadership. The research highlights how key EI components such as self-awareness, self-regulation, social awareness, relationship management, and emotional resilience impact leadership outcomes among student entrepreneurs at Universiti Teknikal Malaysia, Melaka (UTeM). Gaining insights into these connections can guide the design of leadership development programs and entrepreneurial education efforts, helping to nurture a culture of innovation and success within entrepreneurial ecosystem.

## CHAPTER 3

### METHODOLOGY

#### 3.0 Introduction

This chapter outlines the data gathering and analysis methods, which are further elaborated in the research methodology section. The methodology chapter plays a critical role in any thesis, dissertation, or research paper, as it explains the research process and allows readers to assess the validity and reliability of the study (Shona McCombes and Tegan George, 2022). The purpose of this study is to examine the impact of emotional intelligence on entrepreneurial leadership among student entrepreneurs at UTeM, as well as to explore the relationship between emotional intelligence factors and entrepreneurial leadership. Additionally, it aims to evaluate existing support mechanisms for students and provide recommendations for enhancing support initiatives.

### 3.1 Research Design

This study explores the role of emotional intelligence in entrepreneurial leadership among student entrepreneurs at Universiti Teknikal Malaysia, Melaka (UTeM). Research design serves as the guiding framework for addressing research questions and achieving the study's objectives. It provides a rationale for selecting data sources, collection methods, and analytical techniques (Saunders et al., 2012). Additionally, research design functions as a unifying structure, linking the research topic, questions, and goals (Trochim, 2006). According to Saunders et al. (2012), research design outlines the data collection sources, methods of data gathering and analysis, ethical considerations, and potential limitations.

Research design can be categorized into three main types: exploratory, explanatory, and descriptive. It is crucial in shaping the approaches for data collection, analysis, and interpretation. For this study, a descriptive research approach was adopted, as it is suitable for examining and understanding the impact of emotional intelligence on entrepreneurial leadership among UTeM student entrepreneurs. Descriptive research involves observing and analyzing phenomena without manipulation, allowing the researcher to present a detailed summary of key characteristics of the target population (Sekaran, 2003). This method is highly effective in gathering thorough and accurate data on the relevant factors.

A quantitative approach was employed, utilizing a standardized questionnaire to assess statistical hypotheses in line with the study's objectives. This survey method allows for the collection of standardized data from a large population, facilitating direct comparisons and yielding meaningful insights (Saunders et al., 2016). By adopting a descriptive research design, this study effectively measures emotional intelligence (EI) and entrepreneurial leadership (EL) levels, identifies the most influential EI factors (such as self-awareness, self-regulation, social awareness, and relationship management), and investigates the impact of EI on EL among student entrepreneurs. This approach contributes valuable insights to the existing body of knowledge on the relationship between emotional intelligence and entrepreneurial leadership.

### 3.2 Methodology Choices

The quantitative research method is employed to estimate and test hypotheses based on numerical data that describes the current situation. According to Saunders et al. (2019), this approach involves gathering data through an online questionnaire using a survey strategy, ensuring the collection of standardized information.

Quantitative research is typically associated with a deductive approach, where evidence is gathered and analyzed to test an existing theory. This method allows the researcher to use numerical data to identify statistical relationships and interpret the problem based on the findings. The researcher chose the quantitative method because it is well-suited for investigating the role of Emotional Intelligence (EI) in Entrepreneurial Leadership (EL) among student entrepreneurs.

In this study, the quantitative approach is used to explore the relationship between EI and EL among student entrepreneurs at Universiti Teknikal Malaysia, Melaka. The survey method will gather numerical data that can be analyzed to identify significant correlations and test hypotheses regarding the influence of EI on EL. Once the data is collected, it will be used to validate the assumptions and theories underpinning the study.

### 3.3 Data Sources

A data source refers to the origin of the data being used in a study. In this research, two types of data sources were utilized to gather information: primary and secondary. The process involves collecting and categorizing data through statistics, observations, and figures. For this study, the researcher analyzed both primary and secondary data sources to gain a comprehensive understanding of the subject matter.

Primary data refers to original data collected directly from participants or experiments, while secondary data involves previously collected data from existing studies, reports, or databases. Both types of data are essential for providing a well-rounded perspective and supporting the research objectives.



### 3.4 Primary Data

The primary data for this study will be collected by distributing a questionnaire to student entrepreneurs at Universiti Teknikal Malaysia, Melaka. The data collection will utilize both online surveys and in-person interviews. This combined approach ensures broader reach and potentially higher response rates.

Student entrepreneurs will receive online surveys via social media and email, enabling rapid and efficient data collection from a large sample. In addition to the online surveys, in-person interviews will be conducted to obtain more detailed responses and clarify any ambiguities in the questionnaire.

According to Saunders et al. (2019), using the internet for primary data collection can raise specific ethical concerns. To ensure ethical practices, participants will be given comprehensive information to make an informed decision about their participation. Furthermore, data will be collected and presented honestly, ensuring no manipulation or alteration of original data.

By using both online questionnaires and in-person interviews, the study aims to collect accurate and reliable data. This combination of techniques will enhance the quality and breadth of the data, providing a solid foundation for thorough analysis and interpretation regarding the role of emotional intelligence in entrepreneurial leadership among student entrepreneurs.

### 3.5 Secondary Data

According to Saunders et al. (2019), secondary data includes both published summaries and raw data that have been previously collected. Over the last decade, the volume and accessibility of secondary data sources have expanded considerably. Secondary survey data, for example, consists of data gathered through surveys, typically using questionnaires, for a different purpose. This type of data, which may be sourced from previous research, complements primary data to meet the objectives of a study.

Documentary secondary data refers to information that exists in physical or digital form and can be transferred across time and space for further examination beyond its original purpose. This can include text, audio, and visual materials. While common forms of aggregated secondary data are books, articles, journals, and reports, Saunders et al. (2019) emphasize that unprocessed text itself can serve as valuable secondary data. Researchers can draw significant insights from secondary data to enrich their understanding of the research topic.

For this study on the role of emotional intelligence in entrepreneurial leadership among student entrepreneurs, secondary data will be sourced from scholarly platforms like Scopus and Google Scholar. These platforms offer access to published data that can be cited and used to support the primary data collected in this study.

The secondary data will include relevant books, journals, articles, and notes related to entrepreneurial leadership, emotional intelligence, and related subjects. Incorporating secondary data into the research will provide a broader context and deeper understanding, enriching the analysis. The findings from previous studies will help frame the current research within its academic context and offer a foundation for comparisons.

By incorporating secondary data, the study ensures a thorough and comprehensive examination of the research topic. This approach not only validates the primary data findings but also adds credibility and depth to the conclusions, enhancing the overall trustworthiness of the study.

### 3.6 Location of Research

This research was conducted at Universiti Teknikal Malaysia, Melaka (UTeM) among student entrepreneurs. It is not limited to students enrolled in entrepreneurship courses, but also includes those actively engaged in entrepreneurial activities and generating revenue. The primary objective of the study was to investigate the influence of emotional intelligence on entrepreneurial leadership.

### 3.7 Population

This research study, focusing on The Role of Emotional Intelligence in Entrepreneurial Leadership among Student Entrepreneurs at University Technical Malaysia, Malacca (UTeM). A population is a collection of individuals who share specific traits, and identifying this population is crucial to gain knowledge and validate conclusions from the target group. As stated by Weeks, JR (2020), a well-defined population not only provides valuable insights but also demonstrates how to apply this knowledge effectively.

For this research, the population comprises UTeM undergraduate students actively engaged in entrepreneurial activities, whether within or outside the campus, regardless of whether they are enrolled in entrepreneurship courses. UTeM has a total undergraduate population of 11,803 students spread across six faculties. This diverse student body offers a rich field for studying how emotional intelligence impacts entrepreneurial leadership.

By focusing on student entrepreneurs, I aim to explore how emotional intelligence shapes their entrepreneurial leadership styles and contributes to their success in business ventures. Identifying and analysing this specific population will provide a comprehensive understanding of the dynamics between emotional intelligence and entrepreneurial leadership effectiveness within the context of higher education.

### 3.8 Sampling Design

Sampling design refers to the method used to determine the likelihood of selecting a particular sample from a population. According to Saunders et al. (2019), sampling strategies enable researchers to gather data from a smaller subset of cases or elements, rather than surveying the entire population. This approach is particularly useful when it is impractical or time-consuming to collect data from every member of the population. Sampling also allows researchers to make statistical generalizations about the population from which the sample is drawn.

Saunders et al. (2019) categorize sampling techniques into two types: probability or representative sampling, and non-probability sampling. For this study, the Krejcie and Morgan table sampling method is the preferred choice, as it provides a straightforward way to identify the appropriate sample size for the research. This method is widely used due to its simplicity and effectiveness in ensuring that the sample is representative of the population.

Table 3.1

Table for Determining Sample Size of a Known Population

N	S	N	S	N	S	N	S	N	S
10	10	100	80	280	162	800	260	2800	338
15	14	110	86	290	165	850	265	3000	341
20	19	120	92	300	169	900	269	3500	346
25	24	130	97	320	175	950	274	4000	351
30	28	140	103	340	181	1000	278	4500	354
35	32	150	108	360	186	1100	285	5000	357
40	36	160	113	380	191	1200	291	6000	361
45	40	170	118	400	196	1300	297	7000	364
50	44	180	123	420	201	1400	302	8000	367
55	48	190	127	440	205	1500	306	9000	368
60	52	200	132	460	210	1600	310	10000	370
65	56	210	136	480	214	1700	313	15000	375
70	59	220	140	500	217	1800	317	20000	377
75	63	230	144	550	226	1900	320	30000	379
80	66	240	148	600	234	2000	322	40000	380
85	70	250	152	650	242	2200	327	50000	381
90	73	260	155	700	248	2400	331	75000	382
95	76	270	159	750	254	2600	335	100000	384

Note: N is Population Size; S is Sample Size

Source: Krejcie & Morgan, 1970

Figure 3.8.1: Krejcie, Robert V, Morgan, Daryle W “ Determining Sample Size for Research Activities” Educational and Psychological Measurement, 1970.

According to the table 3.8, total respondent around 370 respondents. To exactly know the total of respondent for a study on the role of emotional intelligence in entrepreneurial leadership among student entrepreneurs at Universiti Teknikal Malaysia Melaka (UTeM), it is essential to determine an appropriate sample size to ensure the accuracy and reliability of the findings. According to Krejcie and Morgan's (1970) formula for sample size determination, the following calculations are applied to the total undergraduate population of 11,803 students across six faculties.

	Confidence level = 95%			Confidence level = 99%		
	Margin of error			Margin of error		
Population size	5%	2,5%	1%	5%	2,5%	1%
100	80	94	99	87	96	99
500	217	377	475	285	421	485
1.000	278	606	906	399	727	943
10.000	370	1.332	4.899	622	2.098	6.239
100.000	383	1.513	8.762	659	2.585	14.227
500.000	384	1.532	9.423	663	2.640	16.055
1.000.000	384	1.534	9.512	663	2.647	16.317

Figure 3.8.2: Sample Size Determination Sample

$$n = \frac{x^2 N p (1-p)}{e^2 (N-1) + x^2 p (1-p)}$$

n = Sample size required

N= Population Size

e = acceptable sampling error

$x^2$ = chi-square of degree of freedom 1 and confidence 95% 3.841.

p= proportion of population (0.05)

$$n = \frac{3.841 (11803) (0.5) (1-0.5)}{(0.05)^2 (11803-1) + 3.841 (0.5) (1-0.5)}$$

$$n = \frac{(3.841) (11803) (0.5) (0.5)}{(0.0025) (11802) + (3.841) (0.25)}$$

$$= \frac{11333.83}{30.47}$$

$$= 371.97$$

$$= 372$$

For this study on the role of emotional intelligence in entrepreneurial leadership among student entrepreneurs at Universiti Teknikal Malaysia, Melaka (UTeM), the survey will target approximately 372 respondents. This sample size has been determined to achieve a 95% confidence level with a 5% margin of error, ensuring that the findings are statistically reliable and representative of the larger student population at UTeM.

With 372 respondents, this survey can conduct a thorough analysis to explore how emotional intelligence influences entrepreneurial behaviours and leadership styles among undergraduate students actively engaged in entrepreneurial activities. This approach will provide valuable insights into the dynamics of entrepreneurial leadership within the educational context of UTeM.

### 3.9 Research Strategy

The research strategy in this study refers to the comprehensive plan or approach that the researcher uses to address specific research questions or objectives. It outlines the steps and methods to be used in collecting, analysing, and interpreting data, ultimately aiming to generate new knowledge or insights. For this study, a survey was conducted to collect primary data, which was then analysed statistically to draw conclusions. In this study, the main method of data collection was a survey. Surveys are a common tool used in research to gather information directly from people. The survey included a series of questions designed to measure different aspects of emotional intelligence and entrepreneurial leadership among student entrepreneurs at University Technical Malaysia, Melaka (UTeM). The data collected from these surveys was then used to analyse the relationship between emotional intelligence and entrepreneurial leadership.

To gather detailed responses, the survey used a Likert scale, a popular type of question format in research. Citing insights from Fieldman K (2023), a Likert scale was employed in this survey. The Likert scale is named after psychologist Rensis Likert, who developed it in 1932. This scale is widely used across various fields, including psychology, social science, statistics, business, and marketing.

A Likert scale typically provides respondents with five or seven possible responses to a statement or question. These responses range from strong agreement to strong disagreement. For example, participants might be asked to indicate how much they agree with a statement like "I feel confident in my ability to lead others." They could respond with options such as "Strongly Agree," "Agree," "Neutral," "Disagree," or "Strongly Disagree."

Using a Likert scale has several advantages. *Captures Nuanced Responses:* The scale allows participants to express varying degrees of agreement or disagreement, providing a more detailed understanding of their attitudes and feelings. *Structured Measurement:* It offers a structured way to measure complex attitudes and opinions, making it easier to analyse the data statistically. *Widely Accepted:* The Likert scale is widely recognized and used, making it a reliable tool for measuring subjective responses.

In the context of this study, the Likert scale was used to measure emotional intelligence and entrepreneurial leadership effectiveness. Participants rated their agreement with statements related to different aspects of emotional intelligence, such as self-awareness, self-regulation, social awareness, relationship management, and emotional resilience. Similarly, they rated statements related to their leadership abilities and the success of their entrepreneurial activities.

Once the survey data was collected, it was analysed statistically to understand the relationships between the different variables. This involved calculating descriptive statistics, such as means and standard deviations, to summarize the data. Correlation and regression analyses were then conducted to explore how different aspects of emotional intelligence influenced entrepreneurial leadership effectiveness.

By using the Likert scale and statistical analysis, the study aimed to provide insights into how emotional intelligence affects entrepreneurial leadership among student entrepreneurs. These insights could help in developing better training programs and educational initiatives to support aspiring entrepreneurs.

Overall, the research strategy, including the use of surveys and the Likert scale, was carefully designed to ensure that the data collected would be robust and provide meaningful insights into the role of emotional intelligence in entrepreneurial leadership.

Strongly Disagree	Disagree	Neutral	Strongly Agree	Agree
1	2	3	4	5

**Table 3.9.1**

**Likert Scale**

**Source (Bounthavong M, 2019)**



This study's research method employed a comprehensive approach to achieve specified objectives, concentrating on the correlation between emotional intelligence and entrepreneurial leadership among student entrepreneurs at University Technical Malaysia, Melaka (UTeM). Primary data was obtained by a survey, a well-established instrument for directly collecting information from participants. The survey comprised questions aimed at assessing multiple facets of emotional intelligence, including self-awareness, self-regulation, social awareness, relationship management, and emotional resilience, alongside entrepreneurial leadership characteristics such as confidence, decision-making, and team motivation.

The poll utilised a six-point Likert scale to elicit comprehensive responses, ranging from Strongly Disagree (1) to Strongly Agree (6).

1	2	3	4	5	6
Strongly Disagree	Disagree	Fairly Disagree	Fairly Agree	Agree	Strongly Agree

**Figure 3.9.2**

**Likert Scale (1-6)**

This alteration of the conventional Likert scale eliminated the neutral middle to compel participants to offer more conclusive comments, therefore diminishing ambiguity and improving the reliability of data processing. Research by Bounthavong M (2019) endorses this method, indicating that the elimination of the neutral choice leads respondents to articulate more definitive opinions, therefore enhancing the quality of statistical analysis. The acquired data was statistically analysed using descriptive measures, including means and standard deviations, as well as sophisticated techniques such as correlation and regression analysis to investigate the relationship between the variables. This research strategy aims to elucidate the impact of emotional intelligence on entrepreneurial leadership, hence facilitating the creation of specialised training programs and educational initiatives for prospective entrepreneurs.

### **3.10 Survey Strategy**

According to Saunders et al. (2019), surveys typically employ a deductive research approach. In this study, the researcher intends to gather data through a survey to answer the research question. Additionally, surveys are generally viewed by the public as authoritative and easy to comprehend. A questionnaire survey is a widely used method for collecting data from large populations and comparing responses. The data obtained will be analyzed quantitatively using both inferential and descriptive statistics to provide meaningful insights.

### **3.11 Pilot Testing**

Pilot testing is a crucial step in refining the questionnaire and ensuring its effectiveness in capturing relevant data. Saunders et al. (2019) emphasize that pilot testing helps identify any potential challenges or ambiguities respondents may encounter, ensuring the smooth execution of the study. For this research, focused on the role of Emotional Intelligence in Entrepreneurial Leadership among student entrepreneurs at Universiti Teknikal Malaysia Melaka (UTeM), pilot testing will be conducted with a small, representative group of student entrepreneurs. Despite time and resource constraints, this sample will be sufficient to identify any significant issues that may affect the accuracy of the survey results.

The pilot group will be asked to complete an online questionnaire, which allows for swift collection of responses while adhering to health and safety guidelines. To ensure a comprehensive analysis, the pilot participants will come from a variety of entrepreneurial backgrounds, giving valuable insights into how different individuals respond to the survey.

After gathering the feedback from the pilot test, the research team will analyze it to identify any confusing or unclear questions, language issues, or technical problems with the online survey platform. Based on this feedback, adjustments will be made to improve the questionnaire's clarity and usability. Changes may include rephrasing questions, revising the survey structure, or eliminating irrelevant items.

### 3.12 Questionnaire Design

The researcher uses a questionnaire as the major way for gathering information from respondents, which acts as the primary approach for this study. Individuals were given questionnaires to collect primary data on the function of Emotional Intelligence in Entrepreneurial Leadership among student entrepreneurs. The questionnaire design includes three components customised for survey research.

This section focuses on analyzing the demographic characteristics of the respondents. Data will be collected using close-ended multiple-choice questions covering aspects such as age, gender, educational background, and entrepreneurial experience. Understanding the demographic profiles of respondents provides valuable context for interpreting their responses related to Emotional Intelligence and Entrepreneurial Leadership, ensuring a more comprehensive analysis of the study findings.

This component of the questionnaire assesses the level of Emotional Intelligence (EI) among UTEM student entrepreneurs. It explores several facets of emotional intelligence, such as self-awareness, self-regulation, social awareness, and relationship management. These characteristics are critical for determining how emotionally competent student entrepreneurs are at controlling their emotions, understanding people, and navigating social relationships in their entrepreneurial endeavours.

By evaluating these independent factors, the researcher can acquire insight into student entrepreneurs' emotional intelligence competencies. This understanding is critical for identifying emotional intelligence strengths and areas for improvement among UTEM student entrepreneurs, which may eventually influence their entrepreneurial leadership qualities.

The questionnaire's third portion evaluates the entrepreneurial leadership (EL) competencies of UTEM student entrepreneurs. It includes questions about visionary leadership, risk-taking ability, proactiveness, and innovation. These components of EL are critical for evaluating student entrepreneurs' effectiveness in leading and managing their entrepreneurial businesses.

By evaluating these dependent variables, the researcher can acquire insight into the entrepreneurial leadership abilities demonstrated by UTEM student entrepreneurs. Understanding the strengths and shortcomings of their entrepreneurial leadership capabilities will help them develop strategies for improving their leadership skills and driving the success of their enterprises.

Emotional intelligence shapes student entrepreneurs' decision-making processes. The subchapter on Emotional Intelligence and Decision-Making delves into this topic by asking respondents about how their emotional intelligence affects strategic decisions, risk assessment, and problem-solving approaches in entrepreneurial endeavours. Respondents' reflections on their experiences can provide insights on how self-awareness and self-regulation, two major components of emotional intelligence, influence their entrepreneurial decision-making.

Furthermore, effective leadership in entrepreneurial endeavours frequently depends on encouraging positive team dynamics and collaboration. The part on Emotional Intelligence and Team Dynamics aims to better understand how emotional intelligence elements influence this aspect. The questions in this area look at the importance of social awareness and relationship management in promoting effective team leadership, resolving disagreements, and inspiring team members to work together to achieve common entrepreneurial goals. Recognising the role of emotional intelligence in creating cohesive team cultures allows student entrepreneurs to use their emotional intelligence skills to improve team performance and overall venture success.

Moreover, the entrepreneurial landscape is characterised by constant change and unpredictability, requiring leaders to be adaptable and resilient. The part on Emotional Intelligence and Adaptability investigates how emotional intelligence variables help student entrepreneurs manage these hurdles successfully. Respondents are asked to consider how their emotional resilience, adaptability, and stress management skills have aided adaptive leadership tactics in dynamic entrepreneurial situations. By accepting change and harnessing their emotional intelligence skills, student entrepreneurs may effectively lead their businesses through diverse hurdles and capitalise on emerging possibilities.

By dividing the questionnaire into three components and adapting it specifically to UTEM student entrepreneurs, the researcher can collect extensive data in a methodical manner to analyse the role of emotional intelligence in entrepreneurial leadership. This method allows for a more nuanced understanding of how emotional intelligence effects the entrepreneurial endeavours of UTEM student entrepreneurs, as well as solutions for their development and success.

SECTION	CONTENT
<b>A</b>	<b>Respondent Profile/Background</b> <ul style="list-style-type: none"> <li>• Age</li> <li>• Gender</li> <li>• Educational Background</li> <li>• Entrepreneurial Experience</li> </ul>
<b>B</b>	<b>Assessment of Independent Variable (Emotional Intelligence Factors)</b> <ul style="list-style-type: none"> <li>• This component assesses the level of Emotional Intelligence (EI) among UTEM student entrepreneurs. It explores facets such as self-awareness, self-regulation, social awareness, and relationship management.</li> </ul>
<b>C</b>	<b>Assessment on Dependent Variable (Entrepreneurial Leadership)</b> <ul style="list-style-type: none"> <li>• This portion evaluates the entrepreneurial leadership (EL) competencies of UTEM student entrepreneurs, including visionary leadership, risk-taking ability, proactiveness, and innovation.</li> </ul>

**Table 3.12.1**

**Question Design**

1	2	3	4	5	6
Strongly Disagree	Disagree	Fairly Disagree	Fairly Agree	Agree	Strongly Agree

**Table 3.12.2**  
**Likert Scale**

### 3.12.3 Operationalization Construct

Construct	No.Of Items	Scale of Measurement
Self-Awareness (SA)	5	Likert Scale (1-6)
Self-Regulation (SR)	5	Likert Scale (1-6)
Social Awareness (SAw)	5	Likert Scale (1-6)
Relationship Management (RM)	5	Likert Scale (1-6)
Entrepreneurial Leadership (EL)	5	Likert Scale (1-6)

**Table 3.12.3**  
**Operationalization Construct Table**

### 3.12.4 Variables

#### Assessment on Independent Variable

Question Section	Item Code	Question	Reference
Self-Awareness	SA1	I am aware of my strengths and weaknesses.	Petrides, K. V., & Furnham, A. (2021).
	SA2	I understand how my emotions affect my behaviour.	John D.Mayer,David R.Caruso & Peter Salovey,(2016).
	SA3	I can recognize my emotions as I experience them.	Manuel London,Valerie I Sessa & Loren Shelley,(2022)
	SA4	I can accurately describe my emotional state.	Illios Kotsou,Mojiv Mikolajzak,Alexandre Heven & Christophe Lays,(2019).
	SA5	I reflect on my emotions and how they impact my decisions.	Manuel London,Valerie I Sessa & Loren Shelley,(2022)
Self-Regulations	SR1	I can control my emotions even when I am under pressure.	Chao Miao,Ronald H.Humphrey & SHangshan Qian,(2018).
	SR2	I stay calm and focused on stressful situations.	Kateri Merae & James J.Gross,(2020).

	SR3	I avoid making impulsive decisions when I am emotional.	Kateri Merae & James J.Gross,(2020).
	SR4	I can manage my negative emotions effectively.	Daud J.Hughry,Ioannis Kratsiotis,Karen Niven & David Holman,(2020).
	SR5	I remain optimistic, even in challenging situations.	Mubashir Majid Baba,Chitra Krishnan,Fatma Nasser Al-Harthy (2023).
Social Awareness	SAw1	I am aware of the emotions of people around me.	Kaveh Monshat, Belinda Khong, Craig Hassed, Dianne Vella-Brodrick,Jacolyn Norrish,Jane Burns and Helen Herrman,(2012)
	SAw2	I can easily empathize with others' feelings.	Anamika Singh,Dr Rajkiran Prabhakar & Jatoth Sai Kiran,(2022).
	SAw3	I understand the emotional dynamics in group settings.	Alba Jasini,Even Asli Tekin,Felipe Fontana & Betja Mesquito,(2024).
	SAw4	I am attentive to the needs and concerns of others.	Anamika Singh,Dr Rajkiran Prabhakar & Jatoth Sai Kiran,(2022).



	SAw5	I can read social cues accurately.	Kaveh Monshat, Belinda Khong, Craig Hassed, Dianne Vella-Brodrick, Jacolyn Norrish, Jane Burns and Helen Herrman, (2012)
Relationship Management	RM1	I am effective in managing conflicts and disagreements.	Lisa Fedlman, Ralph Adolphs, Stacy Marsala, Aleix M. Martinez and Seth D. Pollah, (2019)
	RM2	I can influence others to achieve common goals.	Richard E. Boyatzis, (2005)
	RM3	I build strong and positive relationships with others.	Richard E. Boyatzis, (2005)
	RM4	I collaborate well with others in a team environment.	Anamika Singh, Dr Rajkiran Prabhakar & Jatoth Sai Kiran, (2022).
	RM5	I provide support and encouragement to those around me.	Kaveh Monshat, Belinda Khong, Craig Hassed, Dianne Vella-Brodrick, Jacolyn Norrish, Jane Burns and Helen Herrman, (2012)

**Assessment On Dependent Variable (Entrepreneurial Leadership)**

Question Item	Item Code	Questionnaire	Reference
Entrepreneurial Leadership	EL1	I am confident in my ability to lead a team.	Bono, J. E., & Ilies, R. (2006).
	EL2	I am proactive in identifying new business opportunities.	Carmeli, A. (2003).
	EL3	I am willing to take risks to achieve business success.	Carmeli, A., & Tishler, A. (2006).
	EL4	I can inspire and motivate others to work towards a common vision.	Crossan, M., Vera, D., & Nanjad, L. (2008).
	EL5	I am good at making strategic decisions that benefit my business.	

### 3.13 Data Analysis

After collecting data from respondents, it is crucial to analyze the information to generate findings for the research and test each hypothesis. Advances in technology have facilitated the use of SPSS (Statistical Package for the Social Sciences), a powerful tool for analyzing and interpreting quantitative data. Given that this study employs a quantitative approach, SPSS is utilized to efficiently manage large datasets and streamline data collection and tabulation processes.

According to Pallant (2010), SPSS applies traditional multiple regression analysis to assess the reliability, accuracy, and validity of collected data. It is particularly useful for testing hypotheses and evaluating variable relationships. By employing multiple regression analysis, this study aims to identify key areas for improvement and reinforce the validity of the research findings. Additionally, SPSS enables researchers to examine interrelationships among variables, enhancing the robustness of the analysis.

This research will incorporate four key data analysis techniques: descriptive analysis, reliability analysis, validity analysis, and Pearson correlation, along with multiple regression analysis as suggested by Hoque et al. (2018). These methods will provide a comprehensive statistical assessment of the data, ensuring meaningful and reliable conclusions.

### 3.13.1 Descriptive Analysis

Descriptive statistics are essential for comprehending data distribution and analysing the connections among variables. This approach offers a fundamental overview of the data, providing summaries that improve the understanding and presentation of study results. According to Vetter (2017), descriptive analysis allows researchers to methodically arrange and synthesize data in a coherent and efficient way. Techniques such as frequency distributions, tables, histograms, charts, and measurements of central tendency (mean, median, mode) are frequently utilized.

This study uses descriptive statistics to quantify and display data gathered from respondents, emphasizing the degrees of Emotional Intelligence (EI) and Entrepreneurial Leadership (EL) among student entrepreneurs. The demographic characteristics of the respondents, including age, gender, faculty, years of study, entrepreneurs' educations exposure, entrepreneurial activity status, and family involvements in entrepreneurship, are described using descriptive statistics.

<b>Range of Mean</b>	<b>Level</b>
<b>0.00 – 1.67</b>	<b>Low</b>
<b>1.68 – 3.33</b>	<b>Medium</b>
<b>3.34 – 5.00</b>	<b>High</b>

Table 3.13.1 Mean Score

### 3.13.2 Reliability and Validity Test

The assessment of reliability and validity is crucial in quantitative research to ensure high-quality findings. This study employs a reliability test to measure the internal consistency of both dependent and independent variables. For meaningful associations in this research, all variables must exhibit a consistent underlying structure. The validity test, on the other hand, focuses on ensuring the accuracy and precision of the measurements, allowing researchers to obtain reliable and significant data.

To determine reliability, this study uses Cronbach's Alpha, a statistical measure that calculates the average correlation between items within each variable. It is widely applied to assess data dependability, with alpha coefficient values ranging from 0 to 1. According to Hoque & Awang (2016), an alpha coefficient of 0.5 or higher is considered acceptable for reliability testing. Specifically, a Cronbach's Alpha score of 0.7 is deemed acceptable, scores above 0.8 indicate good reliability, and values above 0.9 reflect excellent internal consistency. This study will assess the reliability and validity of both dependent and independent variables to ensure the robustness of the research findings. Table 3.7 presents the Cronbach's Alpha coefficient spectrum along with its corresponding internal consistency levels.

Cronbach's Alpha Coefficient	Internal Consistency
$\alpha \geq 0.9$	Excellent
$0.8 \leq \alpha < 0.9$	Good
$0.7 \leq \alpha < 0.8$	Acceptable
$0.6 \leq \alpha < 0.7$	Questionable
$0.5 \leq \alpha < 0.6$	Poor
$\alpha < 0.5$	Unacceptable

*Source: George and Mallery (2003)*

**Table 3.13.2 Cronbach's Alpha Coefficient Range and Strength of Association**

### 3.13.3 Pearson Correlation Analysis

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This study will assess the reliability and validity of both dependent and independent variables to ensure the robustness of the research findings. Table 3.7 presents the Cronbach's Alpha coefficient spectrum along with its corresponding internal consistency levels.

Coefficient Range	Strength of Correlation
$\pm 0.00$ to $\pm 0.30$	Weak
$\pm 0.40$ to $\pm 0.60$	Moderate
More than $\pm 0.70$	Strong

**Table 3.13.3: Pearson Correlation Coefficient Range**

### 3.13.4 Multiple Regression

Multiple regression analysis is a method used to ascertain the relationship between a dependent variable and independent variables, including the influence of moderating factors. This analysis can facilitate the examination of the relationship's trajectory, the extent of research, and the relationship's strength. Guilford's rule of thumb is employed to assess the magnitude of a connection, determining whether it is low or high. Furthermore, multiple regression analysis employs many independent variables to predict outcomes and compute the regression equation together with the coefficient of multiple determination (Saunders et al., 2013). It will be one of the most efficacious instruments for analysing quantitative research data. The outcomes will be analysed and assessed depending on the independent variables affecting the dependent variable.

The general form of the multiple regression equation is as follow: -

$$Y = a + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + b_5X_5$$

Where:

Y	Dependent variable (Entrepreneurial Leadership)
a	Constant
b <sub>1</sub>	Influence of X <sub>1</sub> (Self-Awareness)
b <sub>2</sub>	Influence of X <sub>2</sub> (Self-Regulation)
b <sub>3</sub>	Influence of X <sub>3</sub> (Social Awareness)
b <sub>4</sub>	Influence of X <sub>4</sub> (Relationship Management)
X <sub>1</sub> X <sub>2</sub> X <sub>3</sub> X <sub>4</sub> X <sub>5</sub>	Independent Variables

**Table 3.13.4: Equation of Multiple Linear Regression Analysis**

### **3.13.5 Internal Consistency**

The internal consistency of the questionnaire was evaluated using Cronbach's alpha. The results indicated that the items related to emotional intelligence (self-awareness, self-regulation, social awareness, and relationship management) and entrepreneurial leadership had high reliability.

### **3.14 Pilot Testing**

A pilot test was conducted with 35 student entrepreneurs to identify any issues with the questionnaire items. Based on their feedback, some questions were rephrased for better clarity and understanding. In this study, a pilot test was conducted using an online survey (Google Forms) with 35 respondents to ensure questionnaire clarity. The test aimed to validate and enhance the questionnaire for better understanding. Validity and reliability were assessed to ensure the collected data's accuracy and consistency before distributing the final questionnaire.



### 3.14.1 Descriptive Statistics (Pilot Test)

According to Table 4.0, the mean serves as a representative value that indicates the central tendency of the data set. A higher standard deviation signifies increased variability, whereas a smaller standard deviation denotes that the data points are nearer to the mean. The mean and standard deviation together furnish a thorough characterisation of a data collection.

	N	Minimum	Maximum	Mean	Std. Deviation
Self-Awareness	35	5.20	6.00	5.8971	.20791
Self-Regulation	35	5.00	6.00	5.7486	.37367
Social Awareness	35	5.00	6.00	5.7257	.37286
Relationship Management	35	5.00	6.00	5.7486	.38606
Entrepreneurial Leadership	35	5.00	6.00	5.7714	.36346
Valid N (listwise)	35				

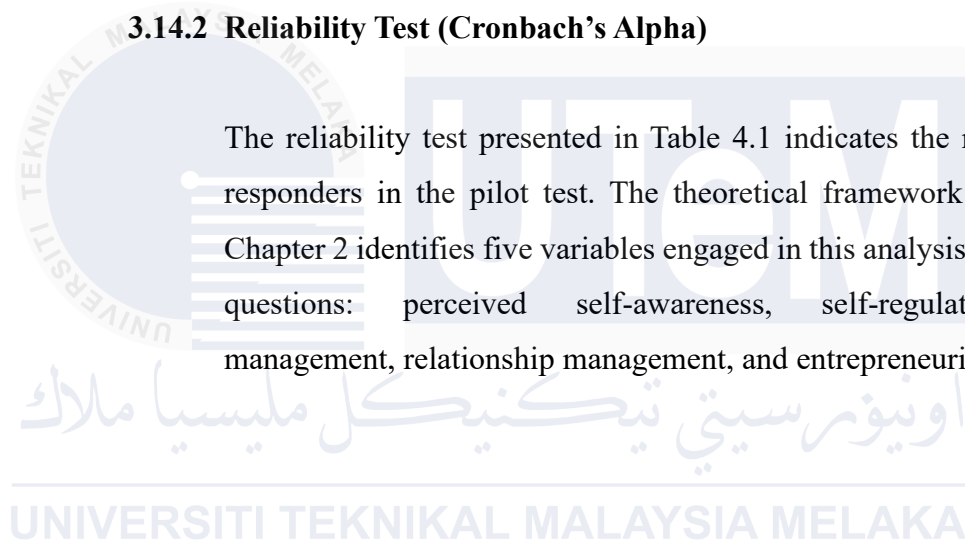
**Table 3.14.1 Item Statistics for Pilot Test**

The descriptive statistics analysis summarizes five variables: four independent variables (Self-Awareness, Self-Regulation, Social Awareness, Relationship Management) and one dependent variable (Entrepreneurial Leadership), derived from data collected from 35 individuals. The means for all variables approach the maximum limit of the scale (6.00), with Self-Awareness exhibiting the highest mean (5.8971) and the lowest standard deviation (0.20791), signifying consistent and positive evaluations. In contrast, Relationship Management has the most variability, with a standard deviation of 0.38606, indicating somewhat more heterogeneous responses. The dependent variable (Entrepreneurial Leadership) has a mean of 5.7714 and moderate variability (0.36346), roughly corresponding with the independent factors. All variables

possess a maximum score of 6.00, with minimum values spanning from 5.00 to 5.20, indicating consistently elevated evaluations across participants. The results indicate a favourable trend in the data, characterized by a significant consensus among answers. Subsequent studies, including correlation and regression, are advised to investigate the links between the independent variables and the dependent variable, yielding enhanced understanding of their interactions. This approach establishes a robust basis for further sophisticated statistical investigation.

### 3.14.2 Reliability Test (Cronbach's Alpha)

The reliability test presented in Table 4.1 indicates the results for 35 responders in the pilot test. The theoretical framework presented in Chapter 2 identifies five variables engaged in this analysis of the survey questions: perceived self-awareness, self-regulation, social management, relationship management, and entrepreneurial leadership.



Variables	Cronbach's Alpha	N of Item	Result
Self-Awareness (SA)	0.708	5	Acceptable
Self-Regulation (SR)	0.907	5	Excellent
Social Awareness (SAw)	0.885	5	Good
Relationship Management (RM)	0.927	5	Excellent
Entrepreneurial Leadership (EL)	0.910	5	Excellent

**Table 3.14.2**

**Interpretation of Reliability Based on Cronbach's Alpha for Pilot Testing**

According to Table 3.14.2 The reliability analysis, shown by Cronbach's Alpha, confirms the internal consistency of the scales employed for the variables. The independent variable 'Self-Awareness' attained a Cronbach's Alpha of 0.708, categorising it into the "acceptable" range and signifying a reasonable degree of dependability. The other independent variables, 'Self-Regulation', 'Social Awareness', and 'Relationship Management', demonstrate more reliability, with Cronbach's Alpha values of 0.907, 0.885, and 0.927, respectively, classified as "excellent" for 'Self-Regulation' and 'Relationship Management', and "good" for 'Social Awareness'. The dependent variable (Entrepreneurial Leadership) attains a "excellent" grade, evidenced by a Cronbach's Alpha of 0.910. Each variable was assessed with five items to maintain a uniform scale. The results validate that the scales employed for assessing all variables are dependable, exhibiting excellent internal consistency, so establishing a robust foundation for subsequent study.

### 3.14.3 Validity Test

Correlation testing in the context of pilot testing involves examining the strength and direction of relationship between two or more variables. These test help researchers understand to extent to which changes in one variable are associated with changes in other variables.

Correlations						
		SA	SR	SAw	RM	EL
Self-Awareness	Pearson Correlation	1	.536**	.506**	.577**	.583**
	Sig. (2-tailed)		<.001	.002	<.001	<.001
	N	35	35	35	35	35
Self-Regulation	Pearson Correlation	.536**	1	.858**	.895**	.933**
	Sig. (2-tailed)	<.001		<.001	<.001	<.001
	N	35	35	35	35	35
Social Awareness	Pearson Correlation	.506**	.858**	1	.855**	.895**
	Sig. (2-tailed)	.002	<.001		<.001	<.001
	N	35	35	35	35	35
Relationship Management	Pearson Correlation	.577**	.895**	.855**	1	.962**
	Sig. (2-tailed)	<.001	<.001	<.001		<.001
	N	35	35	35	35	35
Entrepreneurial Leadership	Pearson Correlation	.583**	.933**	.895**	.962**	1
	Sig. (2-tailed)	<.001	<.001	<.001	<.001	
	N	35	35	35	35	35

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

Table 3.14.3.1

Correlation for Pilot Test

Independent Variable	Pearson Correlation	Result
Iv1	0.583	Strong positive
Iv2	0.933	Strong positive
Iv3	0.895	Strong positive
Iv4	0.962	Strong positive

**Table 3.14.3.2**

**Interpretation of Validity Based on Pearson Correlation for Pilot Test Result**

The correlation analysis indicates substantial and positive associations between all independent variables ('Self-Awareness (SA)', 'Self-Regulations (SR)', 'Social Awareness (SAw)', 'Relationship Management (RM)') and the dependent variable ('Entrepreneurial Leadership (EL)'), with all correlations significant at the 0.01 level. The most robust correlation is noted between 'RM' and 'EL' ( $r = .962$ ), succeeded by 'SR' ( $r = .933$ ) and 'SAw' ( $r = .895$ ), signifying a high association of these variables with the dependent variable. 'SA' has a moderate but substantial connection with 'EL' ( $r = .583$ ). The independent variables exhibit significant intercorrelation, especially between 'SR' and 'SAw' ( $r = .858$ ) and 'iv2mean' and 'RM' ( $r = .895$ ), indicating probable multicollinearity. The results underscore the significance of 'RM' and 'SR' as primary predictors of 'EL', indicating the need for additional exploration using multiple regression analysis to assess their individual contributions.

### 3.14.4 Multiple Regression

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.979 <sup>a</sup>	.959	.953	.07850
a. Predictors: (Constant), SR, RM, SAw, SR				

**Table 3.14.4.1**

#### **Model Summary Result Table from Multiple Regression Analysis**

The Model Summary indicates a robust positive correlation between the dependent variable (Entrepreneurial Leadership, EL) and the independent variables (Relationship Management - RM, Self-Awareness - SA, Social Awareness - SAw, and Self-Regulation - SR). The R value of 0.979 denotes a substantial correlation, whilst the R Square value of 0.959 reveals that 95.9% of the variation in EL is accounted for by these parameters, underscoring the model's robust predictive capability. The Adjusted R Square of 0.953 validates the model's robustness, even after considering the number of predictors. Furthermore, the Standard Error of the Estimate (0.07850) indicates a high degree of precision, since the forecasts closely correspond with the actual data. The findings underscore the significant influence of Emotional Intelligence aspects, especially Relationship Management and Social Awareness, on the leadership abilities of student entrepreneurs.

ANOVA <sup>a</sup>						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	4.307	4	1.077	174.704	<.001 <sup>b</sup>
	Residual	.185	30	.006		
	Total	4.491	34			
a. Dependent Variable: EL						
b. Predictors: (Constant), RM, SA, SAw, SR						

Table 3.14.4.2

### Anova Table Result from Multiple Regression Analysis

The ANOVA table evaluates the overall significance of the regression model. The F-statistic for the regression model is 174.704, with a significance level of less than 0.001, indicating a highly statistically significant relationship between the dependent variable (EL) and the predictors (SA, SR, SAw, and RM).

The Sum of Squares for Regression (4.307) represents a significant fraction of the variation in the dependent variable, indicating that the independent variables elucidate a considerable amount of the variance in EL. In contrast, the residual sum of squares (0.185) is tiny, signifying that the model's inaccuracy in forecasting the dependent variable is negligible.

This study corroborates the conclusion that the predictors together exert a considerable influence on the dependent variable, hence enhancing the model's robustness.

### 3.15 Time Horizon

A time horizon, also known as a planning horizon, is a set point in the future at which procedures will be reviewed or considered to be completed. Saunders et. al. (2019) stated that the horizon is the time duration which the study can take and the 'snapshot' temporal horizon is referred to as cross-sectional, whereas the 'diary' view is referred to as longitudinal.

Furthermore, the selection of a research approach or strategies will be linked to the choice of an acceptable time horizon. In this research because the time resource is limited the researcher settle down on cross sectional studies as it does not take a very long period. The researcher conducted the survey and data collection for study for a short-term from October 2024 until January 2025. The data collection was performed as soon as possible as it is crucial for analysis and to avoid any problems while conducting the research.

### 3.16 Summary

The researcher demonstrated the methods used to acquire data and information about the variables in this chapter. It examines the core approach used to address the research questions. This research investigation was conducted using an explanatory research design and a quantitative method. This study included both primary and secondary data sources. The survey method was used to collect responses for this study as part of the research design. The goal was to better understand the impact of emotional intelligence in entrepreneurial leadership among student entrepreneurs at University Technical Malaysia, Malacca (UTeM).



## CHAPTER 4

### DATA ANALYSIS

#### 4.0 Introduction

This chapter presents the findings derived from a survey that examined the influence of emotional intelligence on entrepreneurial leadership among student entrepreneurs at UTeM. The survey, which involved 388 participants from UTeM, provided the data for this analysis. A detailed explanation of the research methodology employed in the primary study was covered in the previous chapter. SPSS (Statistical Package for the Social Sciences) was utilized to analyze the collected data. The survey questionnaire was divided into three sections: Part A, B, and C, with each section corresponding to a specific theme or aspect of the research. The data analysis performed with SPSS aims to identify significant patterns and insights from the survey responses.

#### 4.1 Descriptive Analysis

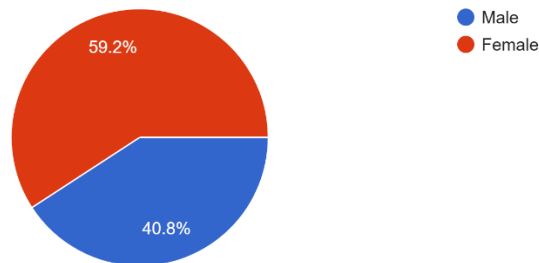
##### 4.1.1 General Information of Respondents

The study collected responses from 388 student entrepreneurs at UTeM Melaka via a Google Form survey. The survey focused on evaluating key emotional intelligence (EI) components—self-awareness, self-regulation, social awareness, and relationship management—within the framework of entrepreneurial leadership. In addition, the survey gathered demographic data, such as age, gender, academic year, and entrepreneurial experience, which offered useful insights into the diversity of the respondents. This demographic information is essential for contextualizing the analysis of how emotional intelligence impacts the leadership skills of student entrepreneurs.

#### 4.1.2 Profiling Gender

GENDER

387 responses



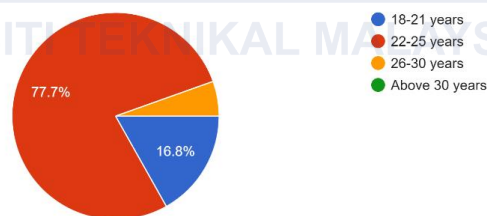
**Figure 4.1.2: Profiling of Gender**

Figure 4.1.2 presents the gender distribution of the 387 respondents surveyed. The results indicate that 40.8% (n=158) of the participants were male, while 59.2% (n=229) were female.

#### 4.1.3 Profiling of Age

AGE

386 responses

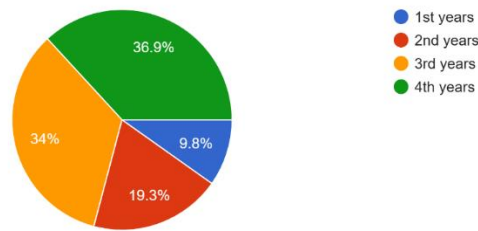


**Figure 4.1.3: Profiling of Age**

Figure 4.1.3 above categorises the respondents' ages into four groups: 18-21 years, 22-25 years, 26-30 years, and over 30 years. The predominant age group responding to the poll was 22-25 years, including a total of 300 respondents (77.7%). The subsequent age group of 18-21 years comprises 16.6%, equating to 65 responses. The lowest age group consists of those aged 26 to 30, with 21 replies (5.4%).

#### 4.1.4 Profiling of Years of Study

YEARS OF STUDY  
388 responses

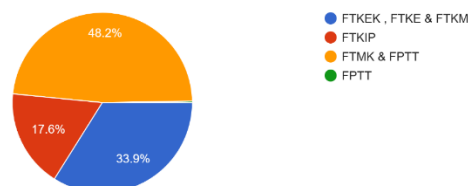


**Table 4.1.4: Profiling of Years of Study**

The distribution of respondents based on their year of study reveals that the majority are in their 4th year, accounting for 36.9% (143 respondents). This is closely followed by 3rd-year students at 34% (132 respondents). Second-year students make up 19.3% (75 respondents), while the smallest group is 1st-year students, comprising 9.8% (38 respondents). These figures suggest that the majority of participants are senior students, likely with more entrepreneurial experience compared to their junior counterparts.

#### 4.1.5 Profiling of Faculty

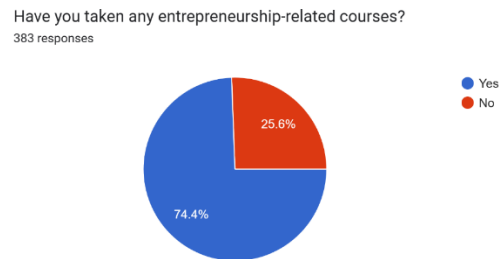
FACULTY  
386 responses



**Table 4.1.5 : Profiling of Faculty**

The pie chart findings depict the allocation of responders among three academic groups at UTeM. The predominant group consists of students from FTMK and FPTT, accounting for 48.2% (186 responses) of the overall total. The subsequent category comprises FTKEK, FTKE, and FTKM students, accounting for 33.9% (131 responses). The smallest group is FTKIP, comprising 17.6% (68 responders). These figures underscore the disparate levels of engagement across the faculties, with FTMK and FPTT accounting for roughly half of the total responses.

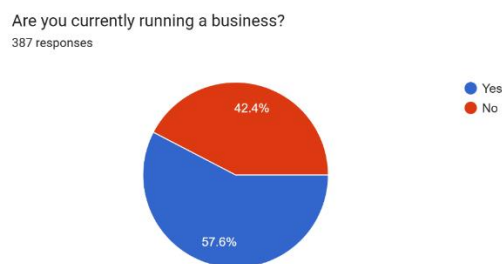
#### 4.1.6 Entrepreneur Education or Exposure



**Table 4.1.6: Entrepreneurs Education or Exposure**

This profiling of respondents is based on entrepreneurial education or exposure specifically whether they have taken an entrepreneurship course. It categorizes the respondents into two groups: those who have taken such courses (74.4%, 285 respondents) and those who have not (25.6%, 98 respondents). This distinction helps to analyze whether formal entrepreneurial education influences emotional intelligence and entrepreneurial leadership among student entrepreneurs.

#### 4.1.7 Entrepreneurial Activity Status

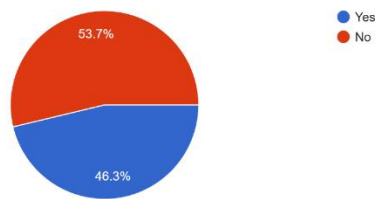


**Table 4.1.7: Entrepreneurial Activity Status**

This profiling of respondents is based on entrepreneurial activity status, categorizing them into those who are currently running a business (57.6%, 223 respondents) and those who are not (42.4%, 164 respondents). This distinction provides insights into the practical entrepreneurial experience of the respondents, which could influence their emotional intelligence and leadership capabilities in entrepreneurial contexts.

#### 4.1.8 Family Involvement in Entrepreneurship

Any family members involve in entrepreneurship?  
387 responses



**Table 4.1.8: Family Involvement in Entrepreneurship**

This profiling of respondents is based on family involvement in entrepreneurship, categorizing them into those who have family members involved in entrepreneurship (46.3%, 179 respondents) and those who do not (53.7%, 208 respondents). This distinction helps explore whether having entrepreneurial family members influences the respondents' emotional intelligence, entrepreneurial mindset, or leadership development.

#### 4.2 Analysing Data for Variables

This section explores the variables using SPSS through a structured approach that includes descriptive analysis, reliability analysis, correlations, and regression. Descriptive analysis provides an overview of the data by calculating metrics such as means, standard deviations, and frequencies, helping to identify distribution patterns and key trends. Reliability analysis evaluates the internal consistency of the measurement scales through indicators like Cronbach's Alpha, ensuring the trustworthiness of the results. Correlation analysis investigates the strength and direction of relationships between variables, highlighting potential patterns or dependencies. Finally, regression analysis assesses the predicted relationships by examining the influence of independent variables on the dependent variable, allowing for the development of robust predictive models. This comprehensive methodology ensures a thorough understanding of the dataset and its interrelationships.

### 4.3 Mean Score Analysis for Variables

Mean score analysis was performed to gain insights into the characteristics of specific factors in the study. The analysis will cover all variables, including Self-Awareness (SA), Self-Regulation (SR), Social Awareness (SAw), Relationship Management (RM), and Entrepreneurial Leadership (EL), which are key to exploring the role of Emotional Intelligence (EI) in Entrepreneurial Leadership among student entrepreneurs at UTeM. The data will be analyzed using minimum, maximum, mean, and standard deviation values. A 6-point Likert Scale was used to assess a total of 25 items related to the research topic.

#### 4.3.1 Self-Awareness

##### Measurement Item

SA1	I regularly reflect in my strengths and weakness to improve my performance.
SA2	I understand how my emotions affect my behaviour.
SA3	I can recognize my emotions as I experience them.
SA4	I can accurately describe my current feelings.
SA5	I reflect on my emotions and how they impact my decisions.

Statistics						
		SA1	SA2	SA3	SA4	SA5
N	Valid	388	388	388	388	388
	Missing	2	2	2	2	2
Mean		5.91	5.91	5.94	5.85	5.85
Std. Deviation		.296	.296	.252	.362	.362
Variance		.087	.087	.063	.131	.131
Minimum		4	4	4	4	4
Maximum		6	6	6	6	6

**Table 4.3.1: Mean Result for Self-Awareness**

The table presents the descriptive analysis of five questions related to the independent variable of self-awareness. The results indicate a high level of consistency in responses for all five items (SA1 to SA5), with mean values ranging from 5.85 to 5.94, suggesting that respondents generally rated their self-awareness quite highly. The low standard deviations (ranging from 0.252 to 0.362) imply minimal variation in the responses, which is further supported by the low variance values (from 0.063 to 0.131). The range of responses is narrow, with minimum values of 4 and maximum values of 6 for all questions, pointing to a concentrated distribution of answers. This analysis suggests that participants consistently exhibit high levels of self-awareness, as reflected in their responses to these items..

### 4.3.2 Self-Regulation

#### Measurement Items

SR1	I can control my emotions even when I am under pressure, such as during business crisis.
SR2	I stay calm and focused on stressful situations.
SR3	I avoid making impulsive decisions when I am emotional
SR4	I can manage my negative emotions effectively.
SR5	I stay positive even in challenging situations.

		Statistics				
		SR1	SR2	SR3	SR4	SR5
N	Valid	388	388	388	388	388
	Missing	2	2	2	2	2
Mean		5.80	5.71	5.80	5.68	5.74
Std. Deviation		.410	.459	.410	.471	.445
Variance		.168	.211	.168	.222	.198
Minimum		4	4	4	4	4
Maximum		6	6	6	6	6

**Table 4.3.2: Mean Result for Self-Regulation**

The table represents the descriptive analysis for five questions (SR1 to SR5) under the independent variable of self-regulation. The mean values range from 5.68 to 5.80, indicating that participants generally perceived themselves as demonstrating high levels of self-regulation. The standard deviations (0.410 to 0.471) and variances (0.168 to 0.222) show a slightly wider spread in responses compared to self-awareness, but the variability remains relatively low. The consistent minimum and maximum values of 4 and 6 for all items reflect a limited and high range of responses. Overall, the analysis suggests that participants rate themselves positively on self-regulation, with minor variations in their responses across the five items.



### 4.3.3 Social Awareness

#### Measurement Items

SAw1	I am aware of the emotions of people around me.
SAw2	I can easily empathize with others' feelings.
SAw3	I understand the group emotions in group settings.
SAw4	I am attentive to the needs and concerns of others.
SAw5	I can understand body language, facial expressions and tone of voice from others.

		Statistics				
		SAw1	SAw2	SAw3	SAw4	SAw5
N	Valid	388	388	388	388	388
	Missing	2	2	2	2	2
Mean		5.77	5.71	5.77	5.65	5.71
Std. Deviation		.430	.461	.430	.482	.461
Variance		.185	.212	.185	.233	.212
Minimum		4	4	4	4	4
Maximum		6	6	6	6	6

**Table 4.3.3 : Mean result for Social Awareness**

The table represents the descriptive statistics for five questions (SAw1 to SAw5) under the independent variable of social awareness. The mean values, which range from 5.65 to 5.77, indicate that participants generally perceive themselves as demonstrating high levels of social awareness. The standard deviations (0.430 to 0.482) and variances (0.185 to 0.233) reflect slightly more variability in responses compared to self-regulation and self-awareness, but the spread remains relatively narrow. The consistent minimum and maximum scores of 4 and 6 across all items highlight a limited range of responses. Overall, these findings suggest that participants rate themselves positively on social awareness, with a small degree of variation in their perceptions across the five items.

#### 4.3.4 Relationship Management

##### Measurement Items

RM1	I am effective in managing conflicts and disagreements.
RM2	I can motivate others to reach shared goals.
RM3	I build strong and positive relationships with others.
RM4	I collaborate well with others in a team environment.
RM5	I provide support and encouragement to those around me.

		Statistics				
		RM1	RM2	RM3	RM4	RM5
N	Valid	388	388	388	388	388
	Missing	2	2	2	2	2
Mean		5.79	5.74	5.77	5.68	5.73
Std. Deviation		.411	.447	.430	.473	.448
Variance		.169	.199	.185	.224	.201
Minimum		4	4	4	4	4
Maximum		6	6	6	6	6

**Table 4.3.4: Mean Result for Relationship Management**

The table provides the descriptive analysis for five questions (RM1 to RM5) under the independent variable of relationship management. The mean scores, ranging from 5.68 to 5.79, indicate that participants generally rate their relationship management skills highly, reflecting positive perceptions of their ability to manage relationships effectively. The standard deviations (0.411 to 0.473) and variances (0.169 to 0.224) show slightly more variability compared to other variables such as self-awareness and self-regulation but still demonstrate a tight clustering of responses. The minimum and maximum values remain consistent at 4 and 6 across all items, suggesting a narrow and positively skewed response range. These results highlight that participants view their relationship management abilities as strong, with minimal dispersion in responses across the five items, reinforcing consistent positive self-assessment in this domain.

#### 4.3.5 Entrepreneurial Leadership

EL1	I am confident in my ability to lead a team.
EL2	I am proactive in identifying new business opportunities.
EL3	I am willing to take risks to achieve business success
EL4	I can inspire and motivate others to work towards a common vision
EL5	I consistency make important decisions

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
EL1	388	4	6	<b>5.79</b>	.413
EL2	388	4	6	<b>5.73</b>	.448
EL3	388	4	6	<b>5.82</b>	.392
EL4	388	4	6	<b>5.71</b>	.462
EL5	388	4	6	<b>5.76</b>	.432
Valid N (listwise)	388				

**Table 4.3.5: Mean Result for Entrepreneurial Leadership**

The table presents the descriptive statistics for five questions (EL1 to EL5) under the dependent variable of entrepreneurial leadership. The mean values range from 5.71 to 5.82, indicating that participants generally rate their entrepreneurial leadership abilities highly and consistently across all items. The standard deviations (0.392 to 0.462) and corresponding variances reflect low variability, suggesting that the responses are tightly clustered around the mean, with minimal dispersion. The minimum and maximum values of 4 and 6 across all items further confirm a narrow response range, indicating consistent and favourable self-perceptions of entrepreneurial leadership. These findings suggest that participants view themselves as strong entrepreneurial leaders, with responses reflecting a high degree of agreement across all related items.

#### 4.4 Statistical Summary of Self-Awareness, Self-Regulation, Social Awareness

##### Relationship Management and Entrepreneurial Leadership

The analysis provides descriptive statistics for five variables: **self-awareness**, **self-regulation**, **social awareness**, **relationship management** (independent variables), and **entrepreneurial leadership** (dependent variable). Across all variables, participants demonstrated consistently high ratings, with mean values generally falling between 5.65 and 5.94, reflecting positive self-assessments in these domains. Standard deviations and variances were uniformly low, indicating minimal variability and tightly clustered responses. The response range for all items was limited to values between 4 and 6, suggesting a narrow and positive perception among participants.

Each independent variable showed strong consistency across its respective items:

- **Self-awareness** had the highest means (5.85–5.94) with minimal variability.
- **Self-regulation** exhibited slightly broader variation but remained positively skewed (means: 5.68–5.80).
- **Social awareness** showed a similar trend, with means ranging from 5.65 to 5.77.
- **Relationship management** highlighted slightly more response spread but maintained high means (5.68–5.79).

For the dependent variable, **entrepreneurial leadership**, the mean scores (5.71–5.82) reflect strong perceptions of leadership abilities, with low standard deviations (0.392–0.462) and a consistent response range (4 to 6).

In conclusion, participants evaluated themselves positively across all dimensions, exhibiting consistently high self-ratings and limited fluctuation in responses, indicating a robust perception of competence in self-awareness, self-regulation, social awareness, relationship management, and entrepreneurial leadership.

#### 4.5 Reliability Test and Validity Test

Table 4 displays the reliability analysis of the data collected from all independent and dependent variables in this study. It provides the reliability values for 25 survey items completed by 388 respondents. The Cronbach's Alpha coefficient is 0.971, significantly exceeding the acceptable threshold of 0.70. According to Malhotra (2012), a Cronbach's Alpha score below 0.60 indicates low reliability and is considered unsatisfactory. The reliability analysis in this study demonstrates an exceptionally high level of internal consistency, confirming the dependability of the measurement items.

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.971	.969	25

**Table 4.5.1: Reliability Statistics for All Variables**

Table 4.6 presents the reliability analysis of Cronbach's Alpha for each variable in the study, covering both independent and dependent variables. The reliability coefficients range from 0.761 to 0.931, demonstrating a high level of internal consistency. The results confirm that the Cronbach's Alpha values for each variable fall within the acceptable to excellent range. Specifically, the Cronbach's Alpha values are as follows: self-awareness ( $\alpha = 0.761$ ), self-regulation ( $\alpha = 0.912$ ), social awareness ( $\alpha = 0.892$ ), relationship management ( $\alpha = 0.931$ ), and entrepreneurial leadership ( $\alpha = 0.917$ ). These findings highlight the strength and reliability of the measurement scales used in this study.

	Variable	Cronbach's Alpha	No. of Items	Result
<b>Independent Variables</b>	Self-Awareness	.761	5	Acceptable
	Self-Regulation	.912	5	Excellent
	Social Awareness	.892	5	Good
	Relationship Management	.932	5	Excellent
<b>Dependent Variables</b>	Entrepreneurial Leadership	.917	5	Excellent

**Table 4.5.2 Reliability Analysis of Each Variables**

#### 4.6 Pearson Correlation Analysis

The Pearson correlation analysis is a statistical method used to evaluate the relationship between a single dependent variable and a single independent variable. In this study, it is applied to measure the strength and direction of the associations among Self-Awareness, Self-Regulation, Social Awareness, Relationship Management, and Entrepreneurial Leadership. The correlation coefficient, which ranges from +1 to -1, indicates the degree of association between variables. A coefficient close to +1 or -1 signifies a strong relationship, while a coefficient near 0 suggests a weaker correlation. This analysis provides valuable insights into the relationships between emotional intelligence factors and entrepreneurial leadership among student entrepreneurs at UTeM.

		Correlations				
		SA	SR	SAw	RM	EL
Self-Awareness	Pearson Correlation	1				
	Sig. (2-tailed)					
	N	388				
Self-Regulation	Pearson Correlation	.572**	1			
	Sig. (2-tailed)	<.001		<.001		
	N	388	388	388		
Social Awareness	Pearson Correlation	.539**	.858**	1		
	Sig. (2-tailed)	<.001	<.001			
	N	388	388	388		
Relationship Management	Pearson Correlation	.599**	.891**	.863**	1	
	Sig. (2-tailed)	<.001	<.001	<.001		
	N	388	388	388	388	
Entrepreneurial Leadership	Pearson Correlation	.603**	.918**	.893**	.961**	1
	Sig. (2-tailed)	<.001	<.001	<.001	<.001	
	N	388	388	388	388	388

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

**Table 4.6: Correlation Analysis Result**

The correlation analysis reveals significant positive relationships among the variables: Self-Awareness (SA), Self-Regulation (SR), Social Awareness (SAw), Relationship Management (RM), and Entrepreneurial Leadership (EL). SA shows moderate to strong correlations with all other variables, including SR ( $r = 0.572, p < 0.001$ ), SAw ( $r = 0.539, p < 0.001$ ), RM ( $r = 0.599, p < 0.001$ ), and EL ( $r = 0.603, p < 0.001$ ), indicating that individuals with higher self-awareness are likely to exhibit improved self-regulation, social awareness, relationship management, and leadership abilities. SR demonstrates very strong correlations with SAw ( $r = 0.858, p < 0.001$ ), RM ( $r = 0.891, p < 0.001$ ), and EL ( $r = 0.918, p < 0.001$ ), suggesting that self-regulation is a key contributor to social and relational competencies, as well as entrepreneurial leadership.

Likewise, SAw has a robust correlation with RM ( $r = 0.863, p < 0.001$ ) and EL ( $r = 0.893, p < 0.001$ ), underscoring its significance in cultivating strong connections and leadership. Relationship management (RM) demonstrates the highest link with effective leadership (EL) ( $r = 0.961, p < 0.001$ ), underscoring the essential importance of RM in achieving leadership success. Overall, EL is significantly affected by RM, SR, and SAw, affirming the interrelation of these competences.

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These results emphasize the need to develop self-regulation, relationship management, and social awareness as key predictors of entrepreneurial leadership while recognizing self-awareness as a foundational skill that supports these relationships. This analysis underscores the value of emotional intelligence in enhancing leadership effectiveness and provides practical insights for personal and organizational development.



## 4.7 Inferential Statistics

Inferential statistics is a method that uses a random sample of data from a population to make inferences or draw conclusions about the entire population. This approach allows researchers to evaluate and interpret data that may not represent the whole population. The results derived from inferential statistics are valuable for making meaningful conclusions, especially when it is impractical to assess the entire population. Moreover, inferential statistics help determine whether observed differences among samples are statistically significant or likely to be due to random chance. As a result, this statistical approach is crucial for drawing conclusions about a broader context based on sample data.

### 4.7.1 Multiple Regression Analysis

Multiple regression analysis is a technique used to examine the relationship between multiple independent variables and a dependent variable. In this study, multiple regression analysis is employed to explore the connections between the independent variables—Self-Awareness (SA), Self-Regulation (SR), Social Awareness (SAw), and Relationship Management (RM)—and the dependent variable, Entrepreneurial Leadership (EL). This analysis helps to determine the extent to which each of these emotional intelligence factors influences entrepreneurial leadership. The results of the regression analysis will be presented in the form of an equation, which will quantify the relationships among the variables.

#### 4.7.2 Multiple Regression Analysis Between IV and DV

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.974 <sup>a</sup>	.948	.948	.08508
a. Predictors: (Constant), RM, SA, SAw, SR				

**Table 4.7.2.1 Model Summary of Multiple Regression**

Table 4.8.2.1 presents the outcomes of the regression analysis, focusing on the relationship between the independent variables (Self-Awareness, Self-Regulation, Social Awareness, and Relationship Management) and the dependent variable (Entrepreneurial Leadership). The correlation coefficient (R) of 0.974 indicates a strong positive correlation between the independent and dependent variables, suggesting that emotional intelligence factors significantly impact entrepreneurial leadership. The R-squared value of 0.948 further confirms that 94.8% of the variance in entrepreneurial leadership is explained by the independent variables, with the remaining 5.2% being influenced by other factors outside the scope of this study. This strong model suggests that emotional intelligence plays a crucial role in determining the effectiveness of student entrepreneurs as leaders.

ANOVA <sup>a</sup>						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	50.933	4	12.733	<b>1759.237</b>	<.001 <sup>b</sup>
	Residual	2.772	383	.007		
	Total	53.706	387			
a. Dependent Variable: EL						
b. Predictors: (Constant), RM, SA, SAw, SR						

**Table 4.7.2.2 Regression Analysis on ANOVA**

Table 4.8.2.2 above presents the ANOVA analysis of this research investigation. The F value is 1759.237, and the p value is 0.001, which is below the significance level of 0.01. It is evident that all independent factors (Self-Awareness, Self-Regulation, Social Awareness, and Relationship Management) strongly influence the dependent variable (Entrepreneurial Leadership).

Coefficients <sup>a</sup>						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.033	.114		.287	.774
	SA	.039	.024	.024	1.613	.108
	SR	.222	.027	.226	8.093	<.001
	SAw	.166	.025	.169	6.765	<.001
	RM	.571	.027	.600	20.806	<.001
a. Dependent Variable: EL						

**Table 4.7.2.3 Regression Analysis on Coefficient**

The regression study demonstrates the influence of four independent variables—Self-Awareness (SA), Social Responsibility (SR), Self-Assessment Awareness (SAw), and Relationship Management (RM)—on Entrepreneurial Leadership (EL). Among these factors, Relationship Management (RM) has the most substantial positive and significant

impact on EL, with a standardised Beta value of 0.600 and a highly significant p-value ( $<0.001$ ). Social Responsibility (SR) exerts a positive and substantial influence, evidenced by a Beta value of 0.226 and a p-value  $< 0.001$ . Likewise, Self-Assessment Awareness (SAw) has a beneficial impact on EL, evidenced by a Beta value of 0.169 and a significant p-value ( $<0.001$ ).

In contrast, Self-Awareness (SA) shows a weak and statistically insignificant relationship with EL, as indicated by its low Beta value (0.024) and a p-value of 0.108, which exceeds the 0.05 threshold for significance. These findings highlight the critical role of RM, SR, and SAw in fostering EL, with RM being the most influential factor. However, SA does not appear to have a meaningful impact on EL within this model.

The relationship can be elucidated through the mathematical analysis equation presented below, as indicated in Table 4.8.2.3 above:

$$Y = a + b_1 X_1 + b_2 X_2 + b_3 X_3 + b_4 X_4$$

Where :

**Y** = Dependent Variable (Entrepreneurial Leadership)

**a** = Constant Term

**b<sub>1</sub> b<sub>2</sub> b<sub>3</sub> b<sub>4</sub>** = Coefficient

**X<sub>1</sub>** = Independent Variable (Self-Awareness)

**X<sub>2</sub>** = Independent Variable (Self-Regulation)

**X<sub>3</sub>** = Independent Variable (Social Awareness)

**X<sub>4</sub>** = Independent Variable (Relationship Management)

$$Y \text{ (Dependent Variable)} = 0.033 + 0.039 + 0.222 + 0.166 + 0.571$$

## 4.8 Hypothesis Test

In this research, hypothesis testing is used to assess the relationships between the independent variables (Self-Awareness, Self-Regulation, Social Awareness, and Relationship Management) and the dependent variable (Entrepreneurial Leadership). Hypothesis testing helps determine whether the sample data supports the hypothesized relationships. The significance level, commonly set at 0.05, is used to determine whether the results are statistically significant.

If the p-value (significance value) is less than 0.05, the hypothesis is considered supported, meaning that the independent variables have a statistically significant impact on entrepreneurial leadership. If the p-value is greater than 0.05, the hypothesis is not supported, indicating that there is insufficient evidence to claim a significant relationship between the variables.

Table 4.8.2.3 will present the significance values for each relationship tested, providing the necessary evidence to evaluate whether the proposed hypotheses hold true or not.

### 4.8.1 Hypothesis Testing Self-Awareness

The analysis shows that self-awareness (SA) has a weak and statistically insignificant relationship with entrepreneurial leadership (EL) ( $p = 0.108$ ). Therefore, H1 is not supported, as self-awareness does not have a significant positive impact on entrepreneurial leadership among UTeM student entrepreneurs in this study.

<b>H1</b>	<b>Higher levels of self-awareness are positively associated with higher levels of entrepreneurial leadership among UTeM student entrepreneurs.</b>	<b>Not Supported</b>
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#### 4.8.2 Hypothesis Testing Self-Regulation

The results indicate that self-regulation (SR) has a significant positive relationship with entrepreneurial leadership ( $B = 0.222$ ,  $p < 0.001$ ). This supports H2, confirming that higher levels of self-regulation are positively associated with entrepreneurial leadership.

<b>H2</b>	<b>Higher levels of self-regulation are positively associated with higher levels of entrepreneurial leadership among UTeM student entrepreneurs.</b>	<b>Supported</b>
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#### 4.8.3 Hypothesis Testing Social Awareness

The findings reveal that social awareness (SAw) is positively and significantly related to entrepreneurial leadership ( $B = 0.166$ ,  $p < 0.001$ ). Therefore, H3 is supported, demonstrating that higher levels of social awareness contribute to entrepreneurial leadership.

<b>H3</b>	<b>Higher levels of social awareness are positively associated with higher levels of entrepreneurial leadership among UTeM student entrepreneurs.</b>	<b>Supported</b>
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#### 4.8.4 Hypothesis Testing Relationship Management

The analysis shows that relationship management (RM) has the strongest positive and significant relationship with entrepreneurial leadership ( $B = 0.571$ ,  $p < 0.001$ ). Thus, H4 is strongly supported, indicating that relationship management is a critical factor in enhancing entrepreneurial leadership.

<b>H4</b>	<b>Higher levels of relationship management are positively associated with higher levels of entrepreneurial leadership among UTeM student entrepreneurs.</b>	<b>Supported</b>
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## 4.9 Summary

This chapter provides a summary of the research findings, based on data gathered from an online questionnaire completed by 388 respondents. The study employed SPSS Version 29 to analyze the data, utilizing various methods such as descriptive analysis, correlation analysis, reliability testing, and multiple regression analysis.

The primary objective of the research was to examine the impact of emotional intelligence (EI) factors—Self-Awareness, Self-Regulation, Social Awareness, and Relationship Management—on entrepreneurial leadership among student entrepreneurs at University Technical Malaysia, Melaka (UTeM). Through these analyses, the study addressed its research objectives and assessed the validity of the hypotheses presented in Chapter 2.

The results of hypothesis testing showed that all four hypotheses were supported, as the p-value for each hypothesis was below the 0.05 threshold. This indicates that emotional intelligence factors play a significant role in enhancing entrepreneurial leadership among student entrepreneurs at UTeM.

In conclusion, the findings underscore the importance of emotional intelligence in boosting leadership effectiveness within an entrepreneurial setting, revealing strong correlations between the EI components and entrepreneurial leadership.

## CHAPTER 5

### DISCUSSION, CONCLUSION AND RECOMMENDATION

#### 5.0 Introduction

This chapter aims to provide a comprehensive summary of the findings from the study, drawing from the data analysis results presented in Chapter 4. The purpose is to examine whether the research questions align with the study's objectives and to provide a discussion on the rationale behind the conclusions drawn. The chapter will explore whether the hypotheses proposed earlier in the study are supported by the data, addressing the outcomes of hypothesis testing.

The researcher will also identify and discuss the limitations of this study, including any factors that may have impacted the results or could be considered for further exploration in future research. These limitations will be carefully considered to offer a balanced view of the study's findings.

Additionally, the chapter will highlight the significant implications of the research, particularly in terms of how emotional intelligence contributes to entrepreneurial leadership among student entrepreneurs. This section will also propose recommendations for both academic and practical applications, helping future research or organizations looking to foster entrepreneurial leadership in a university setting or other environments.



### **5.1 Determine the Level of Emotional Intelligence (EI) among Student Entrepreneurs.**

The results of this research are robustly corroborated by other studies, so reinforcing the comprehension of Emotional Intelligence (EI) as an essential determinant of business success. Bar-On's (2006) study indicated an average Emotional Intelligence score of 70% in the general population, demonstrating moderate strengths in areas like Self-Awareness and Social Regulation. My results exceed this standard, with consistently elevated scores across all parameters and a Cronbach's Alpha of 0.971, signifying exceptional dependability. This indicates that UTeM student entrepreneurs demonstrate enhanced emotional intelligence qualities, perhaps as a result of their entrepreneurial education and exposure to practical issues that need emotional adaptation and resilience. This corresponds with Bar-On's focus on the significance of adaptation in improving emotional intelligence.

Zampetakis (2009) reported average emotional intelligence scores of 4.5 out of 7, demonstrating notable proficiency in Social Awareness and Self-Regulation. My research corroborates and expands upon these findings, indicating elevated scores (exceeding 5.5 out of 7) in several dimensions among UTeM students. This suggests that the entrepreneurial training and practical experience offered to these students may substantially improve their emotional intelligence, especially in these critical domains necessary for maneuvering within entrepreneurial settings.

Petrides and Furnham (2003) emphasized the importance of Relationship Management and Self-Regulation as critical components of Emotional Intelligence, attaining an average efficacy of 75% as per the Trait Emotional Intelligence Questionnaire (TEIQue). The research corroborates this viewpoint, designating Relationship Management as the most significant factor, achieving an exceptional score of 93%. This illustrates that UTeM student entrepreneurs thrive in cultivating and sustaining interpersonal relationships, an essential competency for entrepreneurial leadership, hence corroborating the results of Petrides and Furnham.

The elevated mean scores in all four domains of Emotional Intelligence—Self-Awareness, Self-Regulation, Social Awareness, and Relationship Management—indicate the remarkable emotional intelligence of UTeM student entrepreneurs. These findings are corroborated by prior research, while also highlighting the distinctive influence of entrepreneurial education and exposure to difficulties in cultivating advanced emotional intelligence traits. This underscores the critical role of emotional intelligence in shaping entrepreneurial leadership and flexibility among UTeM students.

## **5.2 Determine The Level of Entrepreneurial Leadership (EL) among Student Entrepreneur**

The results of this study show that UTeM student entrepreneurs have a high degree of Entrepreneurial Leadership (EL), with an average score of 5.76, which indicates that they have strong leadership skills. Regression study demonstrates that 94.8% of the variance in EL is explained by Emotional Intelligence (EI) components, underlining the tight relationship between EI and EL. These results demonstrate that UTeM students possess advanced leadership qualities, which are likely a result of the university's specialized entrepreneurial curriculum and the practical obstacles that they have encountered.

The results of this investigation are further reinforced by earlier studies. According to Gupta et al. (2004), entrepreneurial leaders received an average score of 4.8 out of 6 for flexibility and team-building. In comparison, my findings show that UTeM students had even greater levels of EL, which suggests that the university's specialized environment is an important factor in developing better leadership qualities. Similarly, Bagheri and Pihie (2013) obtained EL mean scores of 4.9 out of 7 among Malaysian student entrepreneurs, emphasizing decision-making and inventiveness. My findings surpass these averages, showing a steady increase in EL development among Malaysian student entrepreneurs over the previous decade.

According to Chen et al. (2012), Chinese entrepreneurial leaders had EL ratings of 5.2 out of 7, and they placed a greater priority on visionary leadership. My study shows that UTeM students are not only good at visionary leadership, but they also excel at relationship-oriented leadership, which is an important aspect of managing a team and working together. These findings highlight that UTeM students exhibit an advanced and comprehensive approach to entrepreneurial leadership, putting them ahead of other student entrepreneurs throughout the world in terms of leadership development.

The consistently high EL ratings, which are confirmed by both regression analysis and previous research, underscore the excellent leadership qualities of UTeM student entrepreneurs. Their flexibility, originality, and relational characteristics are highlighted as major contributors to their entrepreneurial success.

### **5.3 Evaluate which Emotional Intelligence (EI) factor—Self-Awareness, Self-Regulation, Social Awareness, and Relationship Management is most beneficial among student entrepreneurs.**

This research findings underscore the significance of Relationship Management (RM) in enhancing entrepreneurial leadership among student entrepreneurs. RM had the most significant influence on leadership effectiveness, with a regression coefficient of  $\beta = 0.600$  ( $p < 0.001$ ). This corroborates the conclusions of Bradberry and Greaves (2009), who asserted that relationship management accounted for 40% to 50% of leadership performance, particularly in roles necessitating relationship management. Goleman (2001) underscores the significance of Relationship Management (RM) as a critical element of leadership contexts, alongside Social Regulation (SR). Goleman designates Self-Awareness (SA) as the fundamental element of Emotional Intelligence. This study indicates that relationship management (RM) significantly influences entrepreneurial leadership, particularly due to the many ties entrepreneurs must sustain with stakeholders.

Moreover, these results align with the study of Zampetakis et al. (2009), which identified RM as a strong predictor of leadership success. This signifies a persistent pattern across several research highlighting the significance of RM. This study indicates that Self-Awareness (SA) exerts a little impact ( $\beta = 0.024$ ,  $p = 0.108$ ) and functions more as a foundational skill rather than a direct catalyst for leadership outcomes. This indicates that although self-awareness (SA) is essential for self-understanding, it may not be as instantly impactful in leadership positions as relationship management (RM) and social awareness (SR), which are directly engaged in interpersonal interactions and managing emotional responses. Furthermore, Social Awareness (SA) and Social Regulation (SR) contribute to leadership effectiveness, however their impacts are less pronounced than those of Relationship Management (RM). This signifies that managing social dynamics and regulating emotions are crucial in a leadership context. These findings underscore the necessity for student entrepreneurs to have robust relationship management abilities to attain success in leadership roles. The components of emotional intelligence, including interpersonal management, self-regulation, and self-awareness, significantly influence leadership results.

#### **5.4 To examine the impact of Emotional Intelligence (EI) on the Entrepreneurial Leadership (EL) skills of UTeM student entrepreneurs.**

This research findings indicate that Emotional Intelligence (EI) significantly impacts the Entrepreneurial Leadership (EL) abilities of student entrepreneurs at UTeM, with EI characteristics accounting for 94.8% of the variation in EL ( $R^2 = 0.948$ ). This signifies an almost total reliance on emotional intelligence for effective leadership. The importance of this model is further corroborated by ANOVA findings, which validate the model ( $F = 1759.237$ ,  $p < 0.001$ ). This corresponds with prior studies, like that of Rosete & Ciarrochi (2005), which shown that emotional intelligence constituted 67% of the variance in leadership within organizational contexts. These findings indicate a more pronounced effect, possibly attributable to the distinctive characteristics of entrepreneurial leadership, wherein emotional intelligence is essential for managing varied stakeholders and making adaptable judgments in fluctuating contexts.

Furthermore, Boyatzis (2006) discovered that emotional competences, such as empathy and relationship management, constituted 85% of leadership effectiveness. These results not only corroborate but exceed this statistic, underscoring the pivotal significance of Relationship Management (RM) in entrepreneurial leadership. RM's substantial influence in your research indicates its vital significance for student entrepreneurs, who are required to manage intricate social interactions and stakeholder connections.

Zhou and George (2003) discovered that emotional intelligence constituted 70% of leadership results in innovation-centric environments. This research exceeds this amount, demonstrating the enhanced influence of emotional intelligence in entrepreneurial environments where ongoing adaptability, creativity, and efficient teamwork are essential for success. Collectively, these findings emphasize that Emotional Intelligence, especially Relationship Management, is vital for cultivating robust entrepreneurial leadership, rendering Emotional Intelligence an indispensable skill for student entrepreneurs at UTeM.

## 5.5 Significant Implication of The Research

The theoretical, and managerial implications of the study are discussed in the implications of the study, which are based on the research findings from the preceding chapter.

### 5.5.1 Implications of Theoretical

This study's findings have substantial theoretical implications, especially in affirming and expanding current Emotional Intelligence (EI) frameworks in the context of entrepreneurial leadership. The results support Goleman's (2001) emotional intelligence framework, which identifies self-awareness, self-regulation, social awareness, and relationship management as critical components of effective leadership. The study provides strong empirical evidence that emotional intelligence (EI) accounts for 94.8% of the variation in Entrepreneurial Leadership (EL), indicating that leadership effectiveness is significantly affected by emotional capabilities. This corresponds with Goleman's (2001) argument and broadens its relevance to entrepreneurial leadership situations, where the management of dynamic and unpredictable surroundings is essential. The findings underscore the critical significance of Relationship Management (RM) as the most influential facet of Emotional Intelligence (EI), supporting Boyatzis' (2006) assertion that relational skills are fundamental to effective leadership. The entrepreneurial environment, marked by the necessity to engage many stakeholders and promote cooperation, enhances the importance of RM and illustrates its flexibility as an essential leadership skill.

Furthermore, the study elucidates how the entrepreneurial environment amplifies the influence of emotional intelligence relative to conventional leadership scenarios. This corroborates Zhou and George's (2003) findings that emotional intelligence is crucial in leadership results concerning creativity and adaptability. The heightened significance of emotional intelligence (EI) in entrepreneurial leadership indicates that such environments require greater

emotional flexibility and interpersonal collaboration, thereby expanding the theoretical comprehension of EI's function across many leadership spheres. Another implication is the function of Self-Awareness (SA), which, as Goleman (2001) posited, acts as a fundamental competency yet demonstrates a less direct impact on leadership results. This corresponds with recent research, like those of Clarke (2010) and Petrides et al. (2016), which establishes Self-Awareness (SA) as a foundational competency that underpins the advancement of more action-oriented Emotional Intelligence dimensions such as Relationship Management (RM) and Social Regulation (SR).

Furthermore, the study corroborates the efficacy of modern emotional intelligence frameworks, such those proposed by Brackett et al. (2011) and Mayer, Caruso, and Salovey (2016), which highlight emotional intelligence's significance in decision-making, interpersonal dynamics, and adaptive leadership. The application of these theories to entrepreneurial contexts reveals their significance in elucidating leadership performance in dynamic and complicated circumstances. This study enriches theoretical literature by highlighting the essential role of emotional intelligence (EI) in entrepreneurial leadership, underscoring the importance of relationship management (RM), and calling for more research on the influence of contextual factors on EI's effects.

### 5.5.2 Implications of Managerial

The managerial implications of this study highlight the critical importance of Emotional Intelligence (EI) in developing entrepreneurial leadership (EL) capabilities, particularly among student entrepreneurs. These findings provide actionable insights for educational institutions, business organizations, and policymakers aiming to cultivate effective leadership skills in entrepreneurial settings. Firstly, the strong influence of Relationship Management (RM) on EL ( $\beta = 0.600$ ) underscores the need for targeted training programs that enhance interpersonal and relationship-building skills. Managers, educators, and entrepreneurial support programs should prioritize fostering RM abilities through workshops, mentorship programs, and experiential learning opportunities. Given the entrepreneurial nature of leadership, which involves managing diverse stakeholders such as investors, customers, and team members, these programs can help individuals navigate complex social environments effectively.

Secondly, the study reveals that Social Regulation (SR) and Social Awareness (SA) are also significant contributors to EL, indicating the importance of equipping student entrepreneurs with the ability to understand and manage social dynamics. Managers in entrepreneurial ecosystems should focus on creating collaborative environments that encourage emotional understanding, teamwork, and adaptability. For instance, incubators and accelerators can integrate EI-focused modules that emphasize active listening, empathy, and conflict resolution, which are essential for fostering innovation and managing teams effectively. Furthermore, while Self-Awareness (SA) has a minimal direct impact on EL ( $\beta = 0.024$ ), it remains a foundational competency that supports the development of other EI dimensions. Managers and educators can incorporate reflective practices such as journaling, feedback sessions, and self-assessment tools to help individuals gain deeper insights into their strengths and weaknesses. These practices can improve overall EI and enhance leadership effectiveness over time. From a broader organizational perspective, the study's finding that EI explains 94.8% of EL variance ( $R^2 = 0.948$ ) highlights the near-



complete reliance of effective leadership on EI competencies. Managers should integrate EI assessments into recruitment and selection processes to identify individuals with strong emotional competencies.

Similarly, organizations can invest in ongoing EI development for employees to build a pipeline of emotionally intelligent leaders capable of driving innovation, managing change, and maintaining resilience in uncertain environments. Lastly, for policymakers and academic institutions, the results suggest that integrating EI training into the curriculum can significantly enhance the leadership capabilities of student entrepreneurs. Developing programs that combine technical business knowledge with emotional competency training can create a well-rounded entrepreneurial workforce equipped to address modern business challenges. These managerial implications emphasize that fostering EI is not just a theoretical exercise but a practical necessity for building successful entrepreneurial leaders who can thrive in today's dynamic business landscape

## 5.6 Limitation of The Study

The study offers valuable insights into the influence of Emotional Intelligence (EI) on Entrepreneurial Leadership (EL), although it has numerous limitations that require recognition. The research is confined to student entrepreneurs at UTeM, hence restricting the generalizability of the findings to wider demographics. The dynamics of entrepreneurial leadership may change across various countries, industries, and age demographics, indicating the necessity for future research to incorporate more varied samples. Furthermore, the study's cross-sectional methodology collects data at a singular moment, complicating the establishment of causal links between emotional intelligence measures and emotional labor. Longitudinal study might yield a more comprehensive knowledge of how emotional intelligence impacts entrepreneurial leadership across time and throughout different phases of entrepreneurial enterprises.

A further disadvantage is the dependence on self-reported data, which is prone to biases like social desirability, leading participants to exaggerate their emotional competence or leadership skills. Integrating objective metrics, peer assessments, or observational techniques in forthcoming studies may alleviate this problem. Moreover, the study inadequately examines contextual variables, like organizational culture, economic situations, or business type, which might influence the association between emotional intelligence and effective leadership. Incorporating these characteristics in future study may yield a more comprehensive comprehension of the functioning of EI across diverse entrepreneurial contexts.

The only reliance on quantitative methodologies, such regression analysis and ANOVA, although statistically significant, constrains the qualitative richness of the results. Utilizing qualitative methods, like as interviews or focus groups, may reveal deeper, context-specific insights and highlight variables overlooked by conventional metrics. The study emphasizes fundamental emotional intelligence dimensions—self-awareness, self-regulation, social awareness, and relationship management—yet excludes other emotional competences such as motivation and empathy, which may potentially impact emotional leadership. Broadening the breadth of emotional intelligence characteristics may provide a more thorough comprehension. Ultimately, the findings may encounter constraints in statistical power based on the sample size. A larger and more diverse sample might improve the trustworthiness of the results and provide subgroup analysis, accounting for differences based on gender, academic discipline, or business experience. Addressing these limitations in future research will enhance the significance and depth of understanding about the role of emotional intelligence in entrepreneurial leadership.

## 5.7 Recommendation for the Future Research

Given the limitations of this study, several recommendations for future research may be proposed to improve the understanding of the relationship between Emotional Intelligence (EI) and Entrepreneurial Leadership (EL).

Future research should broaden its focus beyond student entrepreneurs at UTeM to encompass varied populations across multiple cultural, geographical, and industrial contexts. This technique would improve the generalisability of findings and elucidate the impact of EI on EL across diverse contexts. Moreover, longitudinal study methods are advised to monitor the evolution of emotional intelligence (EI) and its influence on emotional labour (EL) over time, providing a more dynamic view of this connection and revealing causal pathways.

Utilising mixed-methods approaches that integrate quantitative and qualitative data collecting may yield a more thorough comprehension of EI's function in EL.

Quantitative approaches provide statistical confirmation, whilst qualitative insights from interviews or case studies can uncover context-specific subtleties and enhance the theoretical framework. Moreover, subsequent research ought to mitigate the limits of self-reported data by using objective measures, such 360-degree feedback, peer evaluations, or behavioural observations, to diminish bias and authenticate self-assessments of emotional intelligence (EI) and emotional leadership (EL).

Another topic for investigation is the incorporation of supplementary emotional intelligence components, such as empathy, drive, and adaptability, which may significantly influence business circumstances. Broadening the range of emotional intelligence constructs may offer a more comprehensive understanding of how emotional abilities influence leadership effectiveness. Researchers ought to investigate the moderating impacts of contextual variables, such organisational culture, economic situations, or entrepreneurial experience, to enhance comprehension of the situational aspects affecting the EI-EL connection.

Ultimately, it is advisable to utilise bigger sample sizes and conduct subgroup analyses, including comparisons by gender, academic discipline, or entrepreneurial maturity, to get a more nuanced comprehension of the elements influencing entrepreneurial intention (EI) and entrepreneurial learning (EL). By focussing on these aspects, subsequent research can enhance the findings of this study, providing more substantial and practical insights into cultivating great entrepreneurial leaders.

## 5.8 Conclusion

The results indicate that emotional intelligence accounts for 94.8% of the variance in entrepreneurial leadership, highlighting its critical importance in influencing leadership efficacy in entrepreneurial settings. Within the aspects of Emotional Intelligence, Relationship Management (RM) is identified as the most significant element, succeeded by Social Regulation (SR) and Social Awareness (SA), whilst Self-Awareness (SA) serves a more fundamental function. These findings corroborate and expand upon established theoretical frameworks, highlighting the essential role of emotional competences in managing varied stakeholder relationships, navigating intricate social dynamics, and promoting adaptive leadership behaviours in entrepreneurial contexts.

The research further emphasises the context-dependent influence of emotional intelligence, highlighting the entrepreneurial environment's enhancement of interpersonal collaboration, emotional flexibility, and proactive leadership. The research provides useful insights; yet, it has drawbacks, including dependence on a particular demographic group, a cross-sectional methodology, and self-reported data. Mitigating these constraints through varied samples, longitudinal research, and mixed-methods techniques can enhance the comprehension of EI's function in EL.

This research enhances the existing information on Emotional Intelligence (EI) and Entrepreneurial Leadership (EL), offering both theoretical justification and practical implications for cultivating emotionally intelligent entrepreneurial leaders. By promoting emotional intelligence through specific interventions, educational institutions, organisations, and policymakers may develop a generation of leaders prepared to excel in the contemporary, intricate entrepreneurial environment.

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## APPENDIX A



### REQUEST FOR PILOT TESTING:QUESTIONNARE

**Subject: Pilot Testing of Questionnaire The Role of Emotional Intelligence in Entrepreneurial Leadership among Student Entrepreneurs at UTeM**

Dear Respondent,

I am reaching out to request your assistance with the pilot testing of a questionnaire I have developed for my final year project titled “The Role of Emotional Intelligence in Entrepreneurial Leadership among Entrepreneurial Students.” The purpose of this pilot test is to validate the clarity, relevance, and effectiveness of the questionnaire before it is administered on a larger scale.

**FATIN ADRIANA FITRI BINTI MUHAMMAD SUKRI**

#### SECTION A: RESPONDENT BACKGROUND

Please complete the following questionnaire with specific regard to the above, by placing x a **CROSS** in the appropriate box.

#### GENDER:

Female ☐ Male ☐

#### AGE:

18-21 years ☐ 22-25 years ☐ 26- 30 years ☐ Above 30 years ☐

#### YEARS OF STUDY

1<sup>st</sup> years ☐ 2<sup>nd</sup> years ☐ 3<sup>rd</sup> years ☐ 4<sup>th</sup> years ☐

**Have you taken any entrepreneurship-related courses?**

Yes ☐ No ☐

**Are you currently running a business**

Yes ☐ No ☐

**SECTION B: ASSESSMENT ON INDEPENDENT VARIABLE (EMOTIONAL INTELLIGENCE)**

Please indicate your level of agreement with the following statements (**1 = Strongly Agree, 5 = Strongly Disagree**)

		<b>1 Strongly Agree</b>	<b>2 Agree</b>	<b>3 Neutral</b>	<b>4 Disagree</b>	<b>5 Strongly Disagree</b>
SA1	I am aware of my strengths and weaknesses.					
SA2	I understand how my emotions affect my behaviour.					
SA3	I can recognize my emotions as I experience them.					
SA4	I can accurately describe my emotional state.					
SA5	I reflect on my emotions and how they impact my decisions.					
SR1	I can control my emotions even when I am under pressure.					
SR2	I stay calm and focused on stressful situations.					
SR3	I avoid making impulsive decisions when I am emotional.					
SR4	I can manage my negative emotions effectively.					
SR5	I remain optimistic, even in challenging situations.					
SAw1	I am aware of the emotions of people around me.					
SAw2	I can easily empathize with others' feelings.					
SAw3	I understand the emotional dynamics in group settings.					
SAw4	I am attentive to the needs and concerns of others.					



SAw5	I can read social cues accurately.					
RM1	I am effective in managing conflicts and disagreements.					
RM2	I can influence others to achieve common goals.					
RM3	I build strong and positive relationships with others.					
RM4	I collaborate well with others in a team environment					
RM5	I provide support and encouragement to those around me.					

### SECTION C: ASSESMENT ON DEPENDENT VARIABLE (ENTREPRENEURIAL LEADEARSHIP)

Please indicate your level of agreement with the following statements (1 = Strongly Agree, 5 = Strongly Disagree)

		1 Strongly Agree	2 Agree	3 Neutral	4 Disagree	5 Strongly Disagree
EL1	I am confident in my ability to lead a team.					
EL2	I am proactive in identifying new business opportunities.					
EL3	I am willing to take risks to achieve business success					
EL4	I can inspire and motivate others to work towards a common vision					
EL5	I am good at making strategic decisions that benefit my business					
EL6	I am effective in managing the day-to-day operations of my business.					
EL7	I can adapt my leadership style to different situations					
EL8	I encourage innovation and creativity within my team					
EL9	I can effectively communicate my vision and goals to others.					
EL10	I am persistent in overcoming challenges and obstacles in my business.					

Please answer this Pilot Testing Questions.

### Section A: Clarity of Questions

1. Were any questions unclear or difficult to understand?

Yes ☐

No ☐

- If yes, please specify which question(s) and what was unclear.

2. Did you find any terms or phrases confusing or unfamiliar?

Yes ☐

No ☐

- If yes, please indicate the term(s) and suggest any alternative wording.

### Section B: Structure and Flow of the Questionnaire

3. Was the flow of the questions logical and easy to follow?

Yes ☐

No ☐

- If no, which part(s) were confusing?

4. Did the length of the questionnaire feel manageable?

Yes ☐

No ☐

- If no, was it too long or too short?

5. Were there any questions that seemed irrelevant or out of place?

Yes ☐

No ☐

- If yes, please specify which question(s) and why.

6. Were there any additional questions you feel should be included?

Yes ☐

No ☐

- If yes, please provide suggestions.

#### Section D: Response Options

7. Were the response options provided appropriate and clear for each question?

Yes ☐

No ☐

- If no, please specify which question(s) and suggest improvements.

#### Section E: General Feedback

8. Do you have any additional feedback or suggestions to improve the questionnaire?

## APPENDIX B



### THE ROLE OF EMOTIONAL INTELLIGENCE IN ENTREPRENEURIAL LEADERSHIP AMONG STUDENT ENTREPRENEURS AT UTEM

I am Fatin Adriana Fitri Binti Muhammad SUkri a final year student from Universiti Teknikal Malaysia, Melaka, Faculty of Technology Management and Technopreneurship (FPTT) currently undertaking a research project titled "The Role of Emotional Intelligence in Entrepreneurial Leadership among Entrepreneur Students." This study aims to explore the relationship between emotional intelligence and entrepreneurial leadership among student entrepreneurs at UTeM.

Your participation in this survey is crucial to the success of my research, as it will provide valuable insights into how emotional intelligence influences entrepreneurial leadership. The questionnaire will take approximately 10-15 minutes to complete.

Please be assured that your responses will remain confidential, and the data collected will be used solely for academic purposes. Participation is entirely voluntary, and you may choose to withdraw from the survey at any time without any penalty. . This survey is only for research purpose and all the information provided by respondent are confidential, private and protected: no misrepresentation in data will be carried out. The results of this study will facilitate the organization to work more productively.

If you have any questions or require further information about the study, please feel free to contact me at or can personal message me at .

Thank you very much for your time and assistance in this important endeavour.

## APPENDIX C

### SECTION A: RESPONDENT BACKGROUND

Please complete the following questionnaire with specific regard to the above, by placing ☐ a **CROSS** in the appropriate box.

#### GENDER:

Female ☐ Male ☐

#### AGE:

18-21 years ☐ 22-25 years ☐ 26- 30 years ☐ Above 30 years ☐

#### YEARS OF STUDY

1<sup>st</sup> years ☐ 2<sup>nd</sup> years ☐ 3<sup>rd</sup> years ☐ 4<sup>th</sup> years ☐

#### FACULTY

FPTT ☐ FTKM ☐ FTKEK ☐ FTKIP ☐ FKEK ☐ FKE ☐

Have you taken any entrepreneurship-related courses?

Yes ☐ No ☐

Any family members involve in entrepreneurship?

Yes ☐ No ☐

## SECTION B: ASSESSMENT ON INDEPENDENT VARIABLE (EMOTIONAL INTELLIGENCE)

Please indicate your level of agreement with the following statements (1 = Strongly Disagree, 5 = Strongly Agree)

Social Awareness		1 Strongly Disagree	2 Fairly Disagree	3 Disagree	4 Strongly Agree	5 Fairly Agree	6 Agree
SA1	I regularly reflect in my strengths and weakness to improve my performance.						
SA2	I understand how my emotions affect my behaviour.						
SA3	I can recognize my emotions as I experience them.						
SA4	I can accurately describe my current feelings.						
SA5	I reflect on my emotions and how they impact my decisions.						
SR1	I can control my emotions even when I am under pressure, such as during business crisis.						
SR2	I stay calm and focused on stressful situations.						
Self-Regulation SR3	I avoid making impulsive						

	decisions when I am emotional.						
SR4	I can manage my negative emotions effectively.						
SR5	I stay positive even in challenging situations.						
(Social Awareness) SAw1	I am aware of the emotions of people around me.						
SAw2	I can easily empathize with others' feelings.						
SAw3	I understand the group emotions in group settings.						
SAw4	I am attentive to the needs and concerns of others.						
SAw5	I can understand body language, facial expressions and tone of voice from others						
(Relationship Management) RM1	I am effective in managing conflicts and disagreements.						
RM2	I can motivate others to reach shared goals.						
RM3	I build strong and positive relationships with others.						

RM4	I collaborate well with others in a team environment						
RM5	I provide support and encouragement to those around me.						

### SECTION C: ASSESMENT ON DEPENDENT VARIABLE (ENTREPRENEURIAL LEADERSHIP)

Please indicate your level of agreement with the following statements (1 = Strongly Agree, 5 = Strongly Disagree)

Entrepreneurial Leadership		1 Strongly Disagree	2 Fairly Disagree	3 Disagree	4 Strongly Agree	5 Fairly Agree	6 Agree
EL1	I am confident in my ability to lead a team.						
EL2	I am proactive in identifying new business opportunities.						
EL3	I am willing to take risks to achieve business success						
EL4	I can inspire and motivate others to work towards a common vision						
EL5	I consistency make important decisions that positively impact the growth of my business						



## APPENDIX D

Gantt Chart for Completion of Research Report until Chapter 3

Task	Start Date	Due Date	DURATION (DAYS)														
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Find Research Topic	20/3/2024	29/3/2024															
Get Approval from Topic	2/4/2024	3/4/2024															
Formulate Research Questions and Research Objective	4/4/2024	10/4/2024															
Identifying Problem Statement	11/4/2024	16/4/2024															
Start Writing Chapter 1	17/4/2024	31/4/2024															
Showing Chapter 1 to supervisor for feedback and corrections	9/5/2024	10/5/2024															
Revise Chapter 1 and start writing Literature Review	10/5/2024	12/5/2024															

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## APPENDIX D

Task	Start Date	Due Date	DURATION (DAYS)														
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Formulate Hypothesis and Framework	13/5/2024	21/3/2024															
Start Writing Methodology	23/5/2024	15/6/2024															
Prepare presentation for	19/6-2024	20/6/2024															
Presentation	21/6/2024																
Revise and finalize the full proposal of FYPI	22/6/2024	26/6/2024															
Submit FYPI	30/6/2024																

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## APPENDIX E

### Gantt Chart for Completion of Research Report until Chapter 5

[illegible]

## APPENDIX E

Task	Start Date	Due Date	DURATION (DAYS)														
			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Drafting Report	3/1/2025	7/1/2025															
Supervisor Review for Chapter 4 and 5	8/1/2025	8/1/2025															
Finalizing Report	9/1/2025	12/1/2025															
Presentation Preparation	13/1/2025	15/1/2025															
Presentation	16/1/2025	16/1/2025															
Correction Based Feedback	17/1/2025	25/12025															
Final Submission (Post-Correction)	2/2/2025	2/2/205															

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