



Faculty of Cognitive Sciences and Human Development

**The Effects of Emotional Intelligence on Digital Competency and
Organizational Readiness for Change as a Mediating Factor in Sarawak
Civil Service, Malaysia**

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The Effects of Emotional Intelligence on Digital Competency and
Organizational Readiness for Change as a Mediating Factor in Sarawak Civil
Service, Malaysia

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DECLARATION

I declare that the work in this thesis was carried out in accordance with the regulations of Universiti Malaysia Sarawak. Except where due acknowledgements have been made, the work is that of the author alone. The thesis has not been accepted for any degree and is not concurrently submitted in candidature of any other degree.

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Signature

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ABSTRACT

This study aimed to investigate the effects of emotional intelligence on digital competency and organizational readiness for change as mediating factors in Sarawak Civil Service, Malaysia. This study is important to understand current practices and issues in emotional intelligence, organizational readiness for change and the need for digital competency. This survey design study uses quantitative methods to investigate the aspects in detail. This study involved Sarawak civil service from grade 29 to 54 and the related implemented scheme of service, mainly located in Kuching, Sarawak. A stratified sampling approach was used in selecting respondents for the study. Three main factors were involved: emotional intelligence as an independent variable, organizational readiness as mediating factor, and digital competency as the dependent variable. The Structural Equation Modelling (SEM) approach is used to test and develop the model. This study involves five types of analysis: descriptive analysis, measurement model, pathway analysis, regression analysis and mediation test using the SEM approach. The study's results showed a significant effect among the constructs: emotional intelligence (perception of emotion, managing emotion, utilizing emotion and social skills) on digital competency and organizational readiness for change was partially mediated. In conclusion, emotional intelligence is significant for measuring the effect on digital competency levels. An organization's readiness for change is vital to understanding the preparedness that suits the organization's needs and meets the demand of the industry and the people.

Keywords: Emotional Intelligence, Organization Readiness to Change, Digital competency
Sarawak Civil Servant

Kesan Kepintaran Emosi Terhadap Kompetensi Digital dan Kesediaan Perubahan Organisasi Sebagai faktor Mediator di dalam Perkhidmatan Awam Negeri Sarawak, Malaysia

ABSTRAK

Kajian ini bertujuan untuk mengkaji kesan kecerdasan emosi terhadap kompetensi digital dan kesediaan organisasi untuk perubahan sebagai faktor pengantara dalam Perkhidmatan Awam Sarawak, Malaysia. Kajian ini adalah penting untuk memahami isu dan amalan semasa didalam kecerdasan emosi, kesediaan organisasi untuk perubahan dan keperluan digital kompetensi. Reka bentuk kajian ini menggunakan kaedah kuantitatif untuk mengkaji faktor secara terperinci. Kajian ini melibatkan perkhidmatan awam negeri Sarawak, terutamanya terletak di Kuching, Sarawak dari gred 29 hingga 54 dan skim perkhidmatan yang berkaitan. Pendekatan persampelan berstrata telah diguna pakai dalam memilih responden untuk kajian. Terdapat tiga faktor utama yang terlibat: kecerdasan emosi sebagai pembolehubah bebas, kesediaan organisasi sebagai faktor pengantara, dan kompetensi digital sebagai pembolehubah bersandar. Kaedah Structural Equation Modeling (SEM) digunakan untuk memeriksa dan membangun model Kajian ini merangkumi lima jenis analisis yang terlibat iaitu analisis deskriptif, model pengukuran, analisis "Pathway", analisis regresi dan ujian pengantaraan. Hasil daripada kajian menunjukkan bahawa terdapat kesan yang signifikan di antara konstruk iaitu: kecerdasan emosi (persepsi emosi, mengurus emosi, memanfaatkan emosi dan kemahiran sosial) terhadap kompetensi digital dan kesediaan organisasi untuk perubahan sebagai pengantaraan. Kesimpulannya, kecerdasan emosi adalah penting untuk mengukur kesan ke atas tahap kompetensi digital dan kesediaan organisasi untuk perubahan adalah penting

untuk memahami kesediaan dan keperluan organisasi bagi memenuhi permintaan daripada industri dan rakyat.

Kata kunci: *Kecerdasan Emosi, Kesediaan Perubahan Organisasi, Kompetensi digital, Penjawat Awam Sarawak*

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LIST OF ABBREVIATIONS

CGS	Centre for Graduate Studies
EOC	Emotional Intelligence, Organizational Readiness for Change and Competency
SEM	Structural Equation Modelling
UNIMAS	Universiti Malaysia Sarawak

CHAPTER 1

INTRODUCTION

1.1 Introduction

Emotional intelligence studies evolved over the years and created interest for researchers to explore the needs of emotional intelligence studies and link them to today's issues and concerns. This study intended to explore emotional intelligence's effect on digital competency and organizational change readiness as mediating factors. This chapter aims to ensure a concrete problem statement that links to the study's objectives by identifying current issues and concerns in the emotional intelligence field of study. The robustness of the approach will give meaningful insight for the study to explore further the emotional intelligence study. Chapter 1 reviews the background of the study and the problem statement regarding the issues relevant to the study context. Next, the research questions are presented in tandem with the research objectives and hypotheses. This chapter also explained the significance of the study, limitations, and definitions of key terms. The chapter ends with a summary.

1.2 Background of Study

The COVID-19 pandemic profoundly altered global financial crises and the social, political, and technical landscape. Due to the negative impact, Malaysia's economic growth decreased by 5.6 percent and witnessed a wide-based dip in economic activities. As a result of this downturn, export in Malaysia dropped by 24.2 percent, and unemployment dramatically increased by 4.3 percent in 2020 (Economic Planning Unit, 2021).

To mitigate the impact of COVID-19, The Government of Malaysia has actively and carefully devised precise plans to reduce the pandemic's impact. Twelve Malaysia Plan as the Bigger Umbrella of COVID-19 exit strategies will allow the government to successfully deliver Malaysia Aspirations on time. The other agenda anchors to the Twelve Malaysia Plan are Sustainable Development Goal, Shared Prosperity Vision 2030 and Post Covid-19 Development Strategy (Economic Planning Unit, 2021).

The main pillars in the government agendas are boosting economic activities, improving well-being, social services, basic infrastructure, renewable energy, digital Transformation, human capital development, and strengthening public service delivery (Economic Planning Unit, 2021).

Civil servants are vital in delivering and implementing government strategies in public service. Thus, the demand for highly competent civil servants is significantly crucial at this juncture. In this regard, emotional, social, and technical competencies and other related factors are essential to ensure the government interface meets the public's and government's demands (Economic Planning Unit, 2021).

Competency is defined as a group of behavioural arrays that the urgent necessities to carry to a position to achieve its job and roles with competence (Woodruffe, 1993). Competency is also defined as behavioural facets covering emotional, social, core, and functions necessary to perform a specific job (Boyatzis, Rochford, & Cavanagh, 2017). Civil service competency is always questionable by many people due to operating in volatility, uncertainty, complex, and ambiguous environment (Supramaniam and Singaravelloo, 2021).

Malaysia's Government emphasizes excellent service delivery to the people, which focuses on developing infrastructure, wellbeing, education, socioeconomic and other areas. Civil service needs to be highly competent to spearhead these strategic actions. Hence, in Twelve Malaysia Plan, Four key policy enablers are introduced: developing future talent, accelerating technology adoption and innovation, enhancing connectivity and transport infrastructure, and strengthening public service (Economic Planning Unit, 2021).

Getting down to the nitty-gritty of Malaysian civil service, this policy enabler underpins all themes and other policy enablers in promoting the rakyat's well-being and ensuring Malaysia's long-term socio-economic development. The public sector will strengthen digitalization, citizen-centric decision-making, project implementation, and collaboration and coordination across the three government levels (Economic Planning Unit, 2021). The public sector will be enhanced further, emphasizing honesty and transparency in awareness of current gaps in skills, governance ecosystem, and project management. Priorities of the Twelfth Plan will include building a high-performing civil service, pushing a whole-of-government strategy, and improving budgeting and project management. The game-changer in assuring more efficient and effective public service delivery and optimizing existing resources will be transforming the public service through a whole-of-government strategy. It is critical to examine and streamline the structures and operations of ministries and agencies and guarantee that the roles and responsibilities of members of the administration and civil servants are clearly defined. Furthermore, strengthening the process for selecting influential leaders, improving recruiting professional and managerial officers, and speeding up digitalization would all help improve public service delivery (Economic Planning Unit, 2021).

Competency is critical in the context of Sarawak Civil Service as an indicator to measure success. Sarawak's civil service aspiration is to be a “World Class Civil Service.” The Right Honorable Datuk Patinggi Dr Abang Haji Abdul Rahman Zohari, Sarawak Chief Minister, stated that civil servant is the central backbone of government machinery that important to delivering Sarawak Civil Service (SCS) Transformation agenda 10-20, which covers the development of SCS human capital development (Sarawak Multimedia Authority, 2017).

With the emergence of the digital economy agenda and the pandemic's impact, civil servants are entrusted to play a critical role in digitalization initiatives and leverage their digital competency (Economic Planning Unit, 2021). The impact of a pandemic, industrial revolution and economic shift creates a competitive market for Sarawak, not only in civil service (Sadovyy et al., 2021; Supramaniam and Singaravelloo, 2021). The broad issues are extracted in the Chief minister's speech concerning competitiveness by elevating technological competency and efficient human capital development. As cited in The Right Honorable Datuk Patinggi, Dr Abang Haji Abdul Rahman Zohari, Sarawak Chief Minister (Sarawak Multimedia Authority, 2017), stated that civil servant plays a key role as government interface in accomplishing digital economy agenda aspiration. Digital Competency is defined as functional competency that deals with digital ecosystems and oversees electrical infrastructures and service industries (Khan & Bhatti, 2017).

In addition to the keynote speech by the Chief Minister of Sarawak, he added that “civil servants are the government's support, and knowledge about the digital economy is also critical when civil servants explain it to the people at the grassroots level” (Sarawak Multimedia Authority, 2017). Therefore, the Civil Servant is significant as an agent in

delivering the government agenda at the grassroots level. The state aspiration is a mixture of technical and non-technical competencies that require behavioural competence.

Sarawak Civil Service is spearheading this journey. Thus, civil servants must master all aspects of delivering effective services to the “People.” The core issues here are the readiness of civil servant to embark Digital economy Agenda. There are 47 Strategic Key Areas in Digital Economy that intertwine with the area that this study proposed to explore based on a deductive approach from a broader perspective and narrow down to the individual perspective related to human capital development. This is the biggest challenge for state government is to develop leaders that bring impact to society. Bringing impact from a broader perspective means being competent technically and behaviorally (As cited in Tan Sri Datuk Amar Haji Morshidi Bin Abdul Ghani (State Human Resource Unit, 2015).

From a psychological and behavioural standpoint, it is critical to acquire competency, especially considering the unprecedented situation created by the pandemic's effect. Emotional intelligence is a vital component in building psychological competence as an inner motivator for good transformation outcomes, especially in the face of dynamic shifts and pandemics. The capacity to monitor one's and others' moods and emotions is called emotional intelligence (Boyatzis, Rochford, & Cavanagh, 2017).

According to an international study overview conducted in the Spanish context by Sadovyy et al. (2021), employees with high emotional intelligence demonstrated the highest levels of work performance and the fewest counterproductive work behaviours compared to those with low emotional intelligence who display high levels of workplace stress. Because emotional intelligence has been identified as an essential psychological variable in the workplace, it may play a part in the Covid-19 epidemic (Sadovyy et al., 2021). Concerning

worldwide research, Supramaniam and Singaravelloo's (2021) study in Malaysia indicated that the increased focus on digitization in the public sector necessitates effective and efficient public service delivery. As a result, public employees' EI plays a critical role in bolstering governmental organizations' performance during such periods.

In the context of Sarawak Civil Service, emotional intelligence is vital for a civil servant to develop emotional and social skills in adapting to vibrant geopolitics, government agenda, and challenges on the ground. Indeed, Sarawak is developing states that require high-skilled workers with exceptionally high skills in information technology (State Human Resource Unit, 2015).

Indeed, the technological shift is unavoidable. Thus, the Chief Minister of Sarawak injects this notion to develop Sarawak's economic development and well-being. The shift of technological advancement and the digital revolution will change the economic landscape in the Sarawak context. With the mandate tabled in the eighteenth Dewan Undangan Negeri meeting, Sarawak has no choice but to develop strategies further to accelerate economic growth. (As cited in The Right Honorable Datuk Patinggi Dr. Abang Haji Abdul Rahman Zohari, Sarawak Chief Minister, Sarawak Multimedia Authority, 2017)

In his speech, Tan Sri Datuk Amar Haji Morshidi Bin Abdul Ghani, Sarawak State Secretary, stated, "To accelerate the pace of Sarawak's development and meet the aspiration and expectations of our people, our implementing machinery and delivery mechanisms must be world-class. Therefore, all our civil servants must be competent in accomplishing their tasks and responsibilities" (State Human Resource Unit, 2015).

To cascade and engage at the grassroots level, emotional and social intelligence is significant competency in the civil service context. This is due to the diversity of culture and

geopolitical landscape. In his view, the right honourable Chief Minister of Sarawak stated, “Digitalisation is impacting our economic development as well as social life. It causes constant disruptions and poses a potential threat to those who are reluctant to embrace the new technologies”. To engage and educate the public, civil servants require equipping themselves with emotional competence and other areas of competency facets vital for them to deliver the government agenda.

Many aspects contribute to emotional intelligence that has been found in previous research. Salovey and Mayer (1990) argued that individuals with prior experiences contribute to the development of emotional intelligence in their immediate context. Meanwhile, research conducted by Kong, Bottom, and Konczak (2016) discovered another element contributing to emotional intelligence: the wage situation in the workplace. Byron et al. (2007) examined the relationship between emotional intelligence and working successfully in employment. From individual characteristics to work aspects and rewards, emotional intelligence is a dynamic area inside the person that may be assessed and explored concerning the present circumstances, which is crucial at this juncture, especially in the context of the Malaysian public service. (Supramaniam and Singaravelloo, 2021; Boyatzis, Rochford, & Cavanagh, 2017; Supramaniam & Singaravelloo, 2021).

The fundamental topic that this research will examine is the role of emotional intelligence in coping with dynamic elements (Change management) via the use of or support for digital shifts in both the global and local contexts. These are the central issues facing the world today, as supported by numerous seminal studies in the twenty-first century, and an area of interest for the government in terms of improving service delivery through a focus on emotional intelligence in a dynamic environment, as well as digital competency as

a platform for leveraging talent to meet public demand. (Sadovyy et al., 2021; Economic Planning Unit, 2021)

In light of the variables examined in this study, Lee (2018) stated that in order to meet the expectations of widespread knowledge and awareness of statutory and policy requirements, as well as the ability to maintain a healthy relationship with the public, civil servants are expected to possess high levels of emotional intelligence. Emotional intelligence is a significant component of the characteristics of public sector employees, particularly in terms of emotion perception, emotion use, emotion management, and social skills (Schutte et al., 2009; Lee, 2018). This study uses emotional intelligence as an independent variable based on previous research and the problem addressed in this investigation.

To connect the dots between the variables, the general discussion here will focus on the essential change elements in the Volatile, Uncertainty, Complexity, and Ambiguity (VUCA) environment (Supramaniam & Singaravelloo, 2021). According to Norshidah (2011), the survival of an organization's change preparedness depends on the employee's ability to adjust to the changes. To adapt to changes and the transformation agenda, employees must have a high level of emotional intelligence to support the organization's preparedness for change (Norshidah, 2011). In this research, organizational preparedness for change serves as a mediating element.

Digital competence has a significant influence on emotional intelligence and transition preparedness. Employees in the public sector, particularly those in the civil service, are often confronted with emotionally taxing obligations, transformative agendas, responsibilities, expectations, and the move to digital capabilities (Lee, 2018; Economic Planning Unit, 2021). As a result, the consequences of skill transfer are likewise more

significant. Digital competence is the area of development that the civil service needs to pursue in this research(Sadovyy et al., 2021; Economic Planning Unit, 2021). Oluwatofunmi and Amietsenwu (2019) study on digital emotional intelligence revealed the significant contribution of emotional intelligence toward digital competency. High emotional intelligence results in significant digital competency development as an outcome. Thus, the primary variables involved are emotional intelligence as an independent variable, organizational readiness for change as a mediator and digital competency as the dependent variable.

The Sarawak government's Digital Economy agenda is a catalyst for the civil servant to leverage digital and behavioural competencies (emotional intelligence). To execute the government's aspiration for “Rakyat” wellbeing, this study will be expected to contribute novel contributions in the Sarawak context, especially for academicians, civil service, and human resource practitioners.

1.3 Problem Statement

The impact of the Covid-19 pandemic, international rivalry, technological disruption, and demand is crafting a more concentrated, tempestuous, multifaceted, and undefined organizational setting. Crafting new methods of competitive benefit has become the central part of distress for management in such an undefined and competitive organizational setting. (Economic Planning Unit, 2021). In the modern world, emotional competence and performance factors have always become the major obstacles preventing organizations from producing competent employees that fit into dynamic industrial movements (Boyatzis et al., 2017).

As a result of the Covid-19 pandemic, dynamic technological change, and industrial revolution, organizations need to adapt and align to their objectives and strategy to encounter changes and the industrial revolution (Bikse et al., 2021). Covid-19 has had a profound effect on working conditions, individual mental health, and social interactions between individuals, groups, and organizations, resulting in a "psychological pandemic"; as a result, various mediations are expected to be implemented to improve this situation (Giorgi et al., 2020).

The emergence of the technological and dynamic industrial revolution creates high demand, particularly in addressing the aspect of human capital (Bikse et al., 2021; Khan et al., 2021). Related competency elements, such as emotional and social intelligence, must be developed to humanize the technological process.

Emotional intelligence, in brief, understanding, is defined as “the ability to effectively reason about emotions and use emotions to aid cognitive processes and decisions” (Salovey & Mayer, 1990). Emotional intelligence is a significant predictor of competency and performance (Kunnanatt, 2008). The contribution of emotional intelligence in human resource development is how emotional and social aspects help an individual sustain and develop healthy personalities and communication to adapt to dynamic industrial criteria. The emerging issue in digital emotional intelligence studies and practices has become a critical concern in the 21st century. Not only for the government but also impacted many industries. Digital emotional intelligence will become a new set of competencies in the digital age to measure organization performance. However, there is still a lack of integration of emotional intelligence components in assessing the ability to adapt to new digital skills (Oluwatofunmi & Amietsenwu, 2019).

Numerous organizations pay little attention to emotional intelligence as the best predictor for 21st-century competencies (Boyatzis et al., 2017). Employee survival in 21st century is based on employees' emotional intelligence in adapting to the environment and adjusting to current needs, such as digital competency. Individuals with higher emotional intelligence (EI) demonstrate prosocial behaviours, implicitly gaining the qualities to behave appropriately in interpersonally stressful situations (Supramaniam & Singaravelloo, 2021) study. As businesses become increasingly global and countries become more interconnected, civil service is expected to provide and perform globally, according to stakeholder expectations (Economic Planning Unit, 2021). Currently, the civil service in Malaysia is still deficient in emotional intelligence competency, as evidenced by the 14th general election in the country (Supramaniam & Singaravelloo, 2021).

Another core issue that requires full attention in this study is how employees adapt to change readiness. Employee efficiency ascending after the changes of the technological edge comes from various training procedures and the unskillfulness of employee digital competency (Messe et al., 2014)

In some occupations, employee competency develops after technological shifts while remaining the same (Khan et al., 2021). Some generations, particularly baby boomer employees, may have a low drive and perceive technological transformation as a risk for career development (Messe et al., 2014). The transition of transformational agenda and organizational change requires a change management approach (Bikse et al., 2021). The employee would experience emotional intensity when an individual could not cope with the drastic changes resulting in poor performance and negative organizational performance.

Organizational change readiness is essential in preparing the organization's members to be prepared for the transformational agenda (Norshidah, 2011). Norshidah (2011) explained that when an organization's members have poor emotional intelligence throughout the change process, organizational transformation negatively affects emotional intelligence. Poor adaptability occurs due to bewilderment, a lack of drive, and poor performance.

Over the past ten years, numerous organizations and governmental institutions highlighted the issues such as organizational transformation, change management, performance management, employee development, and succession planning through the implementation of competency modelling programs through strategic initiatives aimed at aligning employee productivity with job requirements (Norshidah 2011; Khan et al., 2021).

To shift toward “World Class Civil Service,” it is vital for Sarawak Civil Service to understand the gravity of its employee readiness and ability to adapt to this change. Thus, this study includes organizational readiness for change elements as a mediator affecting digital competency in the Sarawak context. The matter of “how employee competency can help in achieving organization strategy and objective” has become the focal subject in attaining organizational efficacy (Draganidis & Mentzas, 2006). The employee is the core foundation for the organization to achieve the desired future strategy.

From the perspective of technological change and industrial movement are inevitable, but many companies are unable to sustain themselves due to these dynamic changes (Dai & Liang, 2012). It enhanced the pace of digital change across the board. Numerous countries have shifted to a digital world for jobs and education. Employees must learn new information and abilities to effectively utilize digital technology (Bikse et al., 2021).

The best example is NOKIA. NOKIA lost due to the inability to cope with market needs and industrial movement. As a result, an organization like NOKIA failed to identify digital needs, shifting the market. It is also shown poor competency of NOKIA employees in aligning with current digital competency is one of the contributing factors why a big company like NOKIA made losses and collapsed in 2015 (Peltonen, 2018). According to Peltonen (2018), NOKIA is one of the best example case studies related to transformation and change management. Not only that, the case of NOKIA also uncovers other internal issues such as readiness and competency management within the organization. Thus, by referring to NOKIA case study does help current study to comprehend in depth pertaining to the issues and gap related to human factor, technology and industrial needs.

Emotional intelligence is a significant domain for employees or individuals to adapt to digital needs in the 21st century; in this context is digital competency (Lee, 2018; Supramaniam & Singaravelloo, 2021). The organization also plays a vital role in understanding its members' change readiness, which will help the employee develop and alter their emotional intelligence based on new required digital competency and talent (Norshidah, 2011; Bikse et al., 2021). Thus, the issues are based on proven studies that consider emotional intelligence, organizational readiness for change, and digital competency are vital to ensure the employee is competent with the needs of Industrial Revolution 4.0.

In this study, three (3) main research gaps will strengthen the statement problem: empirical, theoretical, and practical.

1.3.1 Empirical Gap

The value of emotional intelligence studies gives researchers different insights based on context, population, and needs. In this study, the empirical gap is essential to comprehend

the consistency of the findings based on the characteristics. The inconsistency of the findings is due to the objective and targeted population. The argument has fumed into the end opinion regarding the comprehension of emotional intelligence and its past contributions. However, the crux of the issue is the debate on the empirical findings from seminal studies conducted in an international context, based on the rationale of this increased interest in emotional intelligence study. This study uses the basis of previous studies in the 90s and 2000 to relate to the present empirical gap, which should justify the seminal studies' scope.

As a result, various outcomes from different assessment lenses have been discovered. According to a study by Salovey and Mayer (1990), emotions are generated when intense feelings, while moods are produced when emotions are soft concentration.

From various empirical findings. Thus, emotions and moods can be portrayed by the following conditions: grief and antagonism, exhilaration, and excitement. On the other hand, a study by Hede and Hede (2016) showed different findings that indicated emotional conditions that can coordinate and be impacted by individuals' practices like joy, outrage, anxiety, and sadness. However, they could not be constrained by individuals and sometimes be outside and against individuals. Hence, it very well may be said that individuals can continue talking or acting positively to upgrade their positive considerations and, in this manner, improve their positive, passionate states like certainty, innovativeness, and eagerness.

With the rising prominence of the function of emotion in the firm, the overall visualization is that feelings have not gotten a lot of consideration in the brain science (psychological field) of work and the interaction of dynamics, and the emphasis was on discernment and soundness (Bachkirova & Cox, 2007)

Goleman's (1995) study gives different findings explaining that emotion assumes a vital part in human behaviours; for example, the difficulties and disarray in the work environment, particularly in circumstances of crisis, have acquired interest from researchers like Goleman (1995) attempted the dynamic methodology instead of feeling itself. Goleman (1995) aimed to utilize emotional intelligence in the workplace. Emotion has been characterized by Goleman (1995) as the desire to act, the continuous strategies and thoughts for individuals to deal with their life (Goleman, 1995).

Contrary to Goleman's (1995) study, Azouzi and Jarboui's (2013) research showed that a high emotional intelligence rate is not always positively correlated with the executives' suggestibility concerning behavioural biases, which means the result showed some insignificant effects in the workplace. A study by Boyatzis et al.(2017) also showed that peer evaluation significantly predicted employee effectiveness, while general ability did not affect workplace effectiveness (Boyatzis et al., 2017).

However, a recent study by Debes (2021) in the Cyprus context revealed a significant positive correlation between perceived emotional intelligence and self-efficacy in the workplace context. Compared with the previous findings, there were considerable gaps in inconsistency and interest in the context of an organization. Supramaniam and Singaravelloo's local study (2021) explained that a substantial amount of research involving the Malaysian context had been conducted in the education sector but with relatively little research in the public sector. Due to a scarcity of research, it is difficult to delve deeply into the application of emotional intelligence, particularly concerning transformation, change agendas, and digital initiatives (Lee, 2018; Supramaniam & Singaravelloo, 2021).

According to a study by Lee (2018), public service positions demand greater emotional control in the Korean context since they interact with residents, and individuals often seek governmental assistance during the worst moments of their lives. This emotional labor may result in a greater risk of burnout and job dissatisfaction. Notably, burnout and job satisfaction directly correlate with organizational outcomes, such as the desire to leave, absenteeism, work performance, and service quality (Giorgi et al., 2020). Adverse organisational outcomes may affect client services' quality, consistency, and stability, resulting in significant difficulties inside businesses (Sadovyy et al., 2021).

Many organizations negate emotional intelligence as contributing factor to employee competency. Several practitioners and researchers argued it is hard to maintain this, also proven by Supramaniam and Singaravelloo (2021), Sadovyy et al. (2021), Lee (2018), Kearney et al. (2017), Gruicic and Benton (2015), and Boyatzis (2009). Based on the findings, it is significant for this study to investigate emotional intelligence as contributing factor to digital competency in the Sarawak context. This study is guided by the seminal study done in international, Asian, and Local Contexts.

A study done in Malaysia by Tharbe et al. (2021) discovered various components of emotional intelligence that were not mentioned in the western conceptualisation of emotional intelligence. Furthermore, the research defined two themes that were mainly connected to the emotional intelligence of professional assistants: intrapersonal professional talents and professional interpersonal abilities. In multicultural countries, especially Malaysia, the element of the patient was not investigated as part of the emotional intelligence component.

From the perspective of different emotional intelligence levels based on genders, an empirical study by Olson et al. (2019) showed a statistically significant difference between

secondary teacher outcomes based on gender towards emotion management. The sample and population used in Olson et al. (2019) is the population taken from Australian teachers. A study by Al-Qadri and Zhao (2021) discovered statistically significant variations in individuals' emotional intelligence based on gender. By contrast, there were no statistically significant variations in respondents' emotional intelligence levels by grade.

Bikse et al. (2021) study indicated that the pandemic's effect has compelled several sectors and businesses to embrace digital transformation and alter their approaches to creating, delivering, and capturing value for their end-user. Especially in the civil service context, organisations are forced to operate in a dynamic environment to ensure service is delivered to the end-user (Lee, 2018). According to Bikse et al. (2021), in the European context, a significant portion of the Latvian and EU populations, 58 percent of EU citizens and 41 percent of Latvian citizens, still lack fundamental digital skills and are gradually developing them. A significant study issue in this context is that digital transformation as part of change management activities is not inextricably related to developing human capital capabilities. The Malaysia context study by Khan et al. (2021) mentioned a lack of developed indicators such as emotional intelligence and change management readiness and tools to assess the present demand and supply of digital competence in Malaysia since existing measures were produced according to international standards.

Norshidah (2011) and Bikse et al. (2021) argued that transformation is part of change readiness and management strategy. Additionally, businesses will confront the additional problem of managing extensive data in the near future. If they cannot manage change, their competitive position will deteriorate drastically if it catalyzes a genuine industrial revolution based on converging technologies and the impact of pandemics (Bikse et al., 2021).

On the other hand, Mukhtar and Fook (2020) study on attitude toward organisational change refers to a person's overall assessment of the change, which may be positive or negative. Even if organisational change aims to benefit the business and its workers, employees may exhibit adverse reactions to the change. This kind of reaction results from the extreme pressure, stress, and uncertainty caused by the organisational shift. Indeed, as several studies have shown, a negative attitude in readiness for change is a significant factor in the high likelihood of organisational transformation failure (Mukhtar & Fook, 2020).

The study above provides different outcomes due to different views and philosophical interests in explaining the application of emotional intelligence between perceived emotional intelligence and self-efficacy in the workplace context. Different views and nature of the emotional study and related factors give unique insight for the researcher to explore due to dynamic changes and needs based on the industrial requirement. Due to the different outcomes and nature of the empirical studies mentioned, empirical gaps in this study were identified from the Macro and Micro perspective in tandem with the study's objective.

1.3.2 Theoretical Gap

There was a great debate and critiques regarding using the Emotional Intelligence theory. Lindebaum (2009) asserts that the ability model is a dual framework for evaluation. There is reason to suppose that emotional capacities grow with age. For example, various academics have shown that natural emotional intelligence or particular areas correlate substantially with age (Mayer, Caruso, & Salovey, 1999). By contrast, no growth in trait Emotional Intelligence is found with age in research that uses trait emotional intelligence

tests (Lindebaum, 2009). The criticisms below are directed at the empirical evidence that Emotional Intelligence grows with age when measured using a capability scale.

The fundamental mechanism remains somewhat unclear (Zeidner et al., 2004). Lindebaum (2009) also claimed that the ability model is a potential vehicle due to its focus on emotional and intellectual development. Lindebaum (2009) hypothesises that usual or preferred patterns of behaviour (i.e., EI as a characteristic) seldom result in this. Progressive emotional and intellectual development necessitates a shift away from favoured forms of behaviour, particularly if they have shown to be harmful or severe in the past. For example, the thought of rejection from a social group may be excruciating, causing people to hide their feelings (Giorgi, 2013).

Table 1.1: Model Comparison

Item	Four branch ability model of emotional intelligence	Goleman's mixed model of emotional Intelligence
1.	Perceiving Emotion -- the capability to accurately identify one's own feelings and attitudes from those of others, as well as the ability to transmit these emotions.	Self-Awareness is the ability to assess and evaluate one's emotional state and recognise the link between emotions and performance.
2.	Using Emotions -- the capacity to enhance cognitive processes via the use of emotions.	Social Skills --the capacity to form interactive connections via the use of social skills
3.	Understanding Emotions -- the capacity to comprehend complicated emotions and their interaction with the social environment.	Social Awareness -- the capacity to recognise and respond to the emotions of others, as well as to achieve objectives in service and organisational situations
4.	Managing Emotions --the capacity for controlling and monitoring one's emotions.	Self-Management is the capacity to manage one's emotions or transform destructive emotions into more favourable ones.

Model Comparison. Adapted from: Mo (2009)

As a result, people may engage in continuous activity following team expectations, despite their hunches that this does not feel better. The need to seem predictable is such a

fundamental aspect of human nature that it may easily be used to coerce several individuals into doing things they would not normally do (Lindebaum, 2009).

The conflict between behavioural and emotional theories needs to be solved and not solely based on assumptions. A previous Mo (2009) study explained different models of Emotional intelligence and their gaps in greater detail. Mo's (2009) study also mentioned the uniqueness of each model based on specific research conducted by the Mayer and Goleman Emotional Intelligence Model. Two models provided different insights and areas of concern. Mayer's four emotional intelligence models were meant to measure emotional perception, facilitation, understanding, and managing emotions (Mo, 2009). Mayer instrument is not used for self-assessment where the assessment prone toward the assessor to assess the subject it was developed for ability test. However, the Mayer model covers the aspect of big five personalities with the ability to distinguish between big five Personalities (As shown in Table 1.1).

Unlike Mayer's emotional intelligence model, the Goleman model was developed to identify emotional intelligence based on individual awareness, personal management, social consciousness, and social competencies. Goleman mixed model Instrument developed for self-report with no covariance with other emotional tests such as Bar-on and SSRI.

On top of that, the Goleman model does not include the Big five personality test in the instrument developed. As a result, of this theoretical gap, the current study proposed to cover both elements to close the theoretical gap. The mixed model approach is proposed to close the theoretical gap between the two models.

1.3.3 Practical Gap

The practice and implementation of Emotional Intelligence profiling (EI) are vital to measuring the levels of employee emotional intelligence. There are dissimilarities in emotional intelligence profiling practices that drive employee performance and competency.

Concerning the above statement, the Public Service Index of 4.3 percent in 2021 and The Fragile States Index of 56.9 percent has shown that Malaysia's government needs to straighten the service delivery to the people (The Global Economic, 2021). The lower the number or percentage is, the better reflection of the country's performance. The public service index indicators measure health, education, water and sanitation, transportation infrastructure, energy and power, and internet and connection. While The Fragile State index measures security apparatus, factionalized elites, group grievance, economic decline, uneven economic development, human flight and brain drain, state legitimacy, public services, human rights and the rule of law, demographic pressures, refugees and internally displaced persons, and external intervention. The statistics showed that civil service performance is reflected in the service delivery received by the people. Malaysia's public service index should be 2.5 to 2.0, while the fragile index should be below 25 percent (The Global Economic, 2021).

The result above is the repercussion of change, political stability, and transformation initiatives. The government initiates critical strategies, activities, and action plans for transformation. However, organizations must consider this when introducing change and transformation plans (Bikse et al., 2021). Lee (2018) mentioned that Civil servants play a significant role in ensuring the “Rakyat” or people receive the service and proper infrastructure, creating endless demand from the public. Due to this, emotional intelligence

profiling is significant to comprehend the gravity of adaptability for everyone in civil service. Supramaniam and Singaravelloo (2021) expressed that civil service in Malaysia is experiencing government and leadership changes during the 14th general election, and this causes demand and emotional competence in adapting to the changing structure, leadership, culture, service delivery and working tools. The practice of emotional intelligence profiling in the Malaysian context is still lacking due to a lack of awareness and support from relevant parties (Supramaniam & Singaravelloo, 2021).

Most practices are done in the international context and less in the local context. In Sarawak, the implementation of emotional intelligence profiling is only limited to recruitment exercises in civil service (Economic Planning Unit, 2021). The implementation of emotional profiling was only based on succession planning, whereby very much less practice was done due to the factors of budget, size of the business, and as well as time-consuming. This study is crucial for practitioners, organizations, and Sarawak Government. Sarawak Government is on its transformation journey, particularly addressing high-quality employee and talent management under the transformation agenda, Socio-economic transformation plan, Post-Covid Development Strategies and Digital Government. (Economic Planning Unit, 2021).

1.4 General Objective

The purpose of this study is to critically examine whether there is any effect on Emotional Intelligence and the mediating effect of Organizational Readiness for Change towards Digital Competency.

1.4.1 Specific Objectives

The specific objectives of the study aims to investigate the impact of emotional intelligence on digital competency by exploring the effect of perception and management of emotions, social skills, and utilization of emotions. The study also aims to examine the mediating effect of organizational readiness for change on emotional intelligence and digital competency, and develop the best-fit model of emotional intelligence on digital competency and organizational readiness for change. The specific objectives of the study are as follows:

1. To determine the effect of perception of emotion on digital competency.
2. To determine the effect of managing emotion in self on digital competency.
3. To determine the effect of social skills on digital competency.
4. To determine the effect of utilizing emotion on digital competency.
5. To determine the mediating effect of organizational readiness for change on emotional intelligence and digital competency.
6. To develop the best fit model of emotional intelligence on digital competency and organizational readiness for change mediating factor

1.5 Research Hypothesis

In this study, the development of the research hypothesis is explained in-depth in chapter two (2), provided by past studies from macro and micro perspectives. Horton's (2000) study stated that the dichotomy between competency and old-fashioned methods of human management is that the former strains contributions, comprising behavioural features of the employee, while the latter output and performance on the work. Therefore, this study justifies the positive effect of emotional intelligence on digital competency and

organizational readiness for change as mediating factors. In this research, digital competency is the dependent variable which consists of knowledge, skill, and ability. The independent variables in this study are emotional intelligence and organizational readiness for change as mediating factors. The hypothesis is developed based on previous studies done in related fields.

1. H_{a1}: There is a significant effect of perception of emotion on digital competency.
2. H_{a2}: There is a significant effect of managing emotion in self on digital competency.
3. H_{a3}: There is a significant effect of social skills on digital competency.
4. H_{a4}: There is a significant effect of utilizing emotion on digital competency.
5. H_{a5}: There is a mediating effect of organizational readiness for change on emotional intelligence and digital competency.

1.6 Conceptual Framework

The conceptual study framework is synthesized by using the Open System Theory in explaining the alignment of all models related to the variable in the study and integrating the emotional Intelligence model of performance by Goleman (2000), Model of Organizational Change by Lewin (1951), and Digital Competence Model by White and Walker (2015). The variables involved in the study will address the study's outcome and show the path of the hypothesis to be tested in the study. The model of performance by Goleman (2000) is the mixed model of emotional intelligence that measures self-awareness, self-management, social awareness and relationship management. Goleman (2000) studied four main domains to measure employee emotional intelligence in the working environment. In 2009, Schutte et al. (2009) enhanced the study by specifically narrowing it down to the specific instrument

development known as SSRI (Schutte Self Report Inventory) based on the mixed Goleman Model of performance and Ability model by Salovey and Mayer (1990). The application of Schutte et al. (2009) emotional intelligence model measures the emotional intelligence of individuals in the working environment and social setting. A study by Goleman (2000) showed that a high level of emotional intelligence results in high emotional adoption with the changes surrounding and helping individuals develop new skills required to perform a specific task. Emotional intelligence in this study acts as an independent variable that may influence the outcome of organizational readiness for change. To prove this relationship and the significance of the alignment study by Norshiddah (2011) stated that emotional intelligence is the domain that influences the outcome of organizational readiness for change. Hallgrimsson (2008) mentioned that emotional factors and stability are indicators of change management success. As for a mediator, organization readiness for change is derived from the Model of Organizational Change Lewin, (1951). These variable concerns measure emotional intelligence's impact and how organizational readiness for change affects digital competency. The outcome of emotional intelligence is tested to organizational readiness for change to study the mediation effect on change readiness in the organization's context. The mediation effects are tested in direct and indirect effects by using pathway analysis in the structural equation modeling method (Hair et al., 2012). While digital competency is acted as the dependent variable in the study, emotional intelligence is tested on the effect of digital competency. A previous study by Goleman (2000) and Boyatzis, Rochford, and Cavanagh (2017) showed a positive effect of emotional intelligence on competency. Organizational change for readiness is tested based on the moderation effect on both ways to emotional intelligence and digital competency.

The Effects of Emotional Intelligence on Digital Competency and Organizational Readiness for Change as a Mediating Factor in Sarawak Civil Service, Malaysia

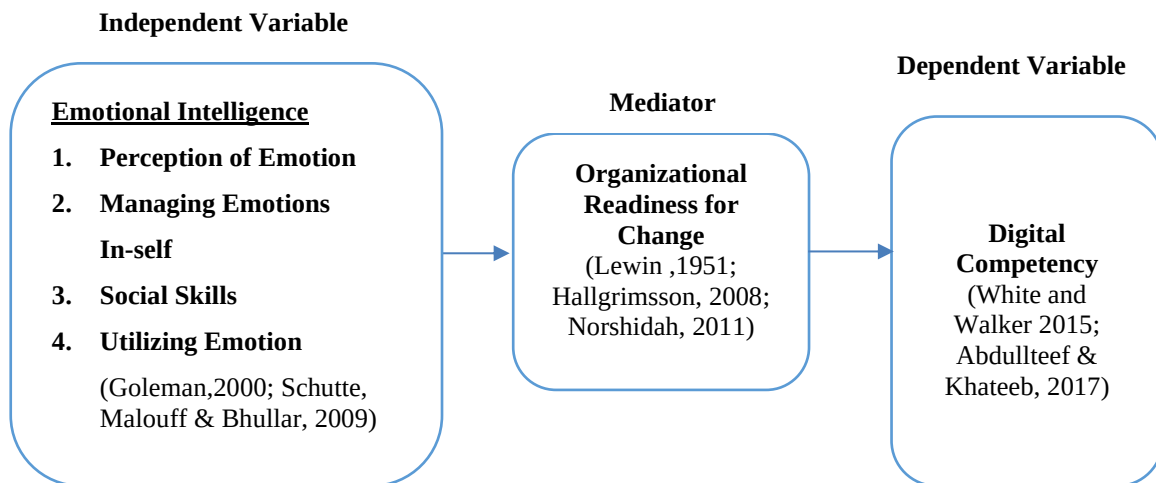


Figure 1.1: Conceptual Framework

1.7 Significance of the Study

The significance of the study is essential to understand from a different standpoint and the contribution of the study from macro and micro perspectives. This section will cover the study's significance from the standpoint of the body of knowledge, significance to the organization, significance to the practitioner and the policy and benchmarking.

1.7.1 Significance to the Body of Knowledge

This study has significance in granting cognizance in human resource development. The first potential contribution main contribution to this study is model development. As industrial needs evolve, the body of research demonstrates that individuals with higher emotional intelligence are better equipped to work cohesively in teams, manage change more effectively, and manage stress more effectively, enabling them to pursue business objectives more efficiently. Previous studies identified five separate categories of abilities that comprise the essential aspects of the emotional intelligence model and claimed that, unlike one's intelligence quotient, these category skills might be acquired where they are lacking and enhanced where they are present (Salovey & Mayer, 1990; Schutte et al., (2009); Boyatzis et al., 2017).

However, few studies focus on developing an emotional intelligence model based on system theory and operational systematics processes in a dynamic environment. This study expects to contribute to model development based on system theory as its underlying emotional intelligence theory. This significant potential contribution helps academicians and practitioners comprehend the epistemology of emotional intelligence in human resource development. The unique potential contribution in the model is improving change factors in the ecosystem in this context is organization readiness for change, secondly improving

understanding on the integration of emotional intelligence and digital competence model especially model development in Malaysia context. The model could improve and formulate new studies in the same field and significantly impact the body of knowledge.

The second potential contribution is this expanding knowledge and literature in human resource development that can be used in Malaysia. Many studies on emotional intelligence in the 21st century are from the perspective of the western context, and a few studies in the Malaysian context, particularly exploring the effect of emotional intelligence on digital competency and organisational change as a mediating factor. There is an instance by seminal studies conducted by Salovey and Mayer (1990), Schutte et al. (2009), and Boyatzis et al. (2017) from a western context that cannot be generalized in Malaysia context due to the difference in term culture difference. Expanding knowledge and literature in the Malaysian context is considered essential to suit the need of the local context, particularly in addressing the body of knowledge.

The third potential contribution is integration in change and digital context. The 21st century is challenging for countries, governments, industries, and individuals. The impact of a pandemic, industrial shift and technological change has created turbulence in many industries (Supramaniam and Singaravelloo, 2021). In the context of emotional intelligence study, few local studies explore the effects of emotional intelligence on digital competency and organizational readiness as mediating factors. The availability of researched variables may lead to a significant reduction in interest in emotional intelligence studies. Thus, reviving the emotional intelligence study by exploring new trends and the context, construct, and current issues may contribute to the knowledge body (Sadovyy et al., 2021). By exploring emotional intelligence and integrating it with change management context on

digital competence context, the finding in this study could be used to evaluate the current situation in employee emotional competence and identify the best possible solution in emotional intelligence profiling.

The fourth potential contribution is strengthening the validity of emotional intelligence studies, mainly to feed the academic world with validated or up-to-date studies. The validated or up-to-date study helps share relevant knowledge with full confirmatory and confidence in a particular emotional intelligence context, epistemology and ontology needs.

1.7.2 Significance to Organization

The organization plays an essential role as a support structure for members and key stakeholders. The organization contributes well-being of the employee and the people of the countries receiving the end service. In the research context, this study potentially contributes to the organization's understanding of how its members behave when a change or transformation requires digital competence. The organization needs the secondary or tertiary party to study the effects of emotional intelligence on digital competency and organization change readiness as mediating factors that may influence organizational performance. This was also explained in Norshidah's (2011) study, indicating that organizational performance relies on employee change readiness based on emotional intelligence profiling. An organisation's success depends on employees' ability to cope with the changes or transformation agenda and the competency needed to deliver the aspirations. On the other hand, this study is also significance to contribute to the effectiveness service delivery in public sector. This study provided empirical evidence to prove the concept and validate the study in emotional intelligence on digital competency and organization readiness change as mediators. The organisation's significance is improving performance based on the direction

anchored by the government's aspirations. According to the study in the organisational context by Lee (2018), emotional intelligence plays a vital role in determining organizational performance. The organization needs to understand this contribution from the perspective of profiling emotional intelligence and organization change readiness for digital competency.

In view of change management strategy, this study gives benefits to the organisation to understand the use of data in exploring root cause of the problem, population and current issues based on validated and proven facts and figures. The formulation of strategic planning and talent management relies on empirical study evidence. Not only that, but the organization will also use empirical evidence to forecast the trajectory of success rate, especially in human resource development.

1.7.3 Significance to Practitioners

There are lacunae in the practice of emotional intelligence profiling in the local context. This was also explained in the study of Supramaniam and Singaravelloo (2021) and Lee (2018). Most practices are more in the western context and different nature of population and type of job. This study is expected to contribute to the practitioners regarding emotional intelligence profiling in the 21st century. A little study in the local context addresses current issues, primarily operating in the VUCA environment (volatile, uncertainty, complexity, and ambiguity). According to Lee (2018), operating in a dynamic environment has created emotional tension due to the public's demands. The practitioners play a role in applying empirical evidence in this study and translating it into the operational process for emotional intelligence profiling activity.

The empirical evidence in this study feeds the practitioners the relevant data that address change factors and digital competence supported by the literature in the study. By

having the empirical evidence, the practitioners could develop “Human Resource Intelligence” that will improve the emotional intelligence matrix, talent match, and digital competence profiling. The finding of this study could also help human resource practitioners further enhance their practices in the organization to improve their current practices. Thus, human resource practitioners must be aware of the changing trends of the factors that drive emotional competency because of individual needs, environmental factors and mushrooming of new industries such as the website industry.

1.7.4 Significance to Policy and Benchmarking

Apart from contributing to the past research, this study would also improve policies and benchmarking. To ensure the practice is up to date based on empirical evidence, policymakers need to assess and revisit current practice and map it against the organization’s future direction. This study offers a potentially significant contribution to the organization to strengthen the practice of emotional intelligence profiling as part of talent identifications and talent analytics in the human resource development field. Firm policy results in the vigorous implementation of the practice, and implementing the practices requires solid policy in the process as a reference for members of the organization. Thus, it also helps policymakers link the policy development based on the emotional intelligence study to the desired aspirations of the organization. Policymakers especially could come out with new or improved policies in accordance with the findings of the research. This study would enable the policymakers to create more relevant and significant policies relating to emotional competence based on organisational needs. In addition, a new policy could also amend the existing policy to suit the current needs. On the other hand, this study's empirical evidence

could potentially be used to benchmark organization emotional intelligence profiling amongst other industrial players in the local and global market.

1.8 Scope of the Study

This study covers the emotional intelligence domain, namely: - perception of emotion, managing emotion in self, social skills, and utilizing emotion. While mediation in this study is organizational readiness for change, the dependent variable is digital competence. This study was scoped to Sarawak Civil Service from grades 29 to 54 and the related implemented scheme of service within Sarawak such as scheme of service acting or covering, temporary appointment post, project leader scheme of service and other significant scheme.

The population of this study is coping into Sarawak Civil Service sample comprising ministry, department, units, residence, and district office. This study measures the effect of emotional intelligence on digital competency whilst organizational readiness for change is a mediator. The study's analysis comprises descriptive statistics covering demographic background, central measurement tendency, reliability test, normality test, and exploratory factor analysis. While for inferential statistics uses three types of parametric testing, namely:- structural equation modelling comprises the measurement model, structural model and regression analysis.

1.9 Definition of Terms

The relevant terms for this study are first defined conceptually and then followed by an operational definition in that order of sequence.

1.9.1 Emotional Intelligence

According to Salovey and Mayer (1990), emotional intelligence entails the capacity to perceive, appraise accurately, and express emotions, access and generate feelings when they facilitate through the capacity to comprehend emotions and emotional knowledge; and regulate emotions to promote emotional and intellectual development. While Boyatzis, Rochford, & Cavanagh (2017) defined emotional intelligence as the ability to monitor one's and others' feelings and emotions. The conceptual definition of emotional intelligence is based on two models: ability and mixed (Sadovyy et al., 2021). Goleman (1995) defined emotional intelligence as a blend of competencies and common expressions for individual adaptive functioning and adapting to environmental necessity. In this study, operational definition for emotional intelligence is defined as an individual's ability to use their own emotions that benefit their development (Schutte et al., 2009); this includes four elements of emotional intelligence, namely:- perception of emotion, utilizing emotion, managing emotion and social skills.

1.9.2 Perception of Emotion

Perception of emotion is defined as the ability to decode information. It entails identifying information conveyed by facial expressions, tone of voice, gestures, body posture, colour, and other cues (Salovey & Mayer, 1990). Perception of emotion is also discussed in previous seminal studies. In Goleman's (1995) study, perception of emotion is

defined as an individual ability to portray expression based on the perception of his or her emotion. Perception of emotion is one of the main variables involved in this study. Studies in the western context view perception of emotion as self-awareness of individual emotion when dealing with people and surroundings (Salovey & Mayer, 1990; Goleman. 1995). This study's operational definition for perception of emotion is "how individuals portray their emotion toward what they perceived (Schutte et al., 2009).

1.9.3 Managing Emotion

Managing emotion concept has been discussed in many emotional intelligence studies in the international context. The context of managing emotions is to cope with positive and negative feelings (Lee, 2018.) In Schutte et al. (2009) study, managing emotion originates from environmental cues that influence emotion, such as stress. Thus, it is the ability to adjust own emotions based on the social environment. Schutte et al. (2009) developed the SSRI instrument based on how individuals manage their emotions when experiencing positive and negative feelings in a social setting. On top of that, a study done by Olson et al. (2019) describes emotion management as a concept concerned with how a person uses their ability to modify emotion and other emotions in a social setting. The context of managing emotions is to cope with positive and negative feelings. In this study, operational definition for managing emotion is an individual's ability to adapt, socialize, use emotion and manage positive and negative emotions (Schutte et al., 2009).

1.9.4 Social Skill

Boyatzis, Rochford, and Cavanagh (2017) also mentioned that social skill is part of competency by developing emotional intelligence. Social skills are the relational skills individuals develop to suit themselves in people. In the Supramaniam and Singaravelloo

(2021) study, social skills were defined as relationship management for the individual. Goleman (1995) also stated that individuals with high social skills typically portray good relationship management in a social setting. Social skills are derived from the mixed model domain that mainly focuses on managing relationships with others. In this study, operational definition for social skills is defined as the ability to socialize within a group of people (Schutte et al., 2009).

1.9.5 Utilizing Emotion

Schutte et al. (2009) also emphasize utilising emotion as an element for individual survival and social adjustment. Schutte et al. (2009) also defined utilizing emotion as the ability to use emotion in impacting cognition and behaviour and the use of emotion as a necessary component of adaptive functioning. Salovey and Mayer (1990) also defined utilizing emotional cognition and action as adaptive cognition and behaviour inspired by emotional experience. In view of Goleman (1995), utilizing emotion is awareness of emotion that influences good decisions in social settings. The concept of utilizing emotion was defined in the previous studies focusing on applying emotion and being aware of emotion leading to the excellent decision (Salovey and Mayer, 1990; Goleman, 1995; Schutte et al., 2009). This study defines operational definition for utilizing emotion as an emotional application in adapting to the social setting (Schutte et al., 2009).

1.9.6 Organizational Readiness for Change

The conceptual definition of Organizational readiness for change in this study is defined as the inclination to unfreeze established patterns of behaviour within the internal and external environment (Norshidah, 2011). Readiness is related to Lewin's (1951) classical state of unfreezing and reflected in the attitudes of organizational members.

According to Almanei et al. (2018), organizational preparedness for change varies according to how highly organisational members value the change and how positively they see three critical variables of implementation capability such as work requirements, resource availability, and contextual variables.

While operational definition for organizational readiness for change in this study is defined as the individual perception of organizational readiness to embark on change internally and externally, such as structure, technological change, policy, and competency (Norshidah, 2011).

1.9.7 Digital Competency

Competency is defined as a group of behavioural arrays that the urgent necessities to carry to a position to achieve its job and roles with competence (Woodruffe, 1993). Meanwhile, Shellabear (2002) defined competency profiling as a technique for classifying specific skills, knowledge, attitudes, and behaviours essential to accomplishing a job, role, or task. The conceptual definition of digital competency is defined as the skills necessary to work in digital environments and manage electronic infrastructures and services (Khan & Bhatti, 2017).

According to Khan and Bhatti (2021), Digital Competence is a set of expertise, skills, and attitudes required when utilising information, computer and technology and digital media to complete tasks. This competency involves solving problems, communicating, managing information, creating, collaborating, sharing content, and developing knowledge effectively. This study defines operational definition for digital competency as the groups of linked digital abilities, skills, and knowledge to perform the task (Abdulteeef & Khateeb, 2017).

1.10 Chapter Summary

This chapter has discussed the background of the study, statement of the problem, research objective and questions, hypothesis, conceptual framework, the importance of the study, constraints of the research, and definitions of terms. Every component holds its specific importance for this study. The study background comprises a succinct analysis of the background concerns, and the entire section shapes the understanding of this study. The ensuing chapter delves into the review of related literature.

CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

Chapter 2 in this study explains the literature review aspect deductively from a general perspective to a specific perspective. The purpose and the significance of explaining the literature thoroughly result in robust literature support for this study based on the previous related studies, models and theories from a macro and micro perspective. Literature in this study is linked to the study's objectives and hypothesis development. The first part of this literature introduces the emergence of digital economy and concept, issues in digital competency followed by emotional intelligence, bibliometric analysis in emotional intelligence, followed by organizational readiness for change as a mediator and the importance of digital competency in the 21st century. The second part of this chapter explains the related theories and models. This chapter's third part explains the development of hypothesis followed by past studies from macro and micro perspectives that cover emotional intelligence, organizational readiness for change, and digital competency. This chapter ends with a summary.

2.2 Understanding the Concept of Digital Competency in Digital Economy

The COVID-19 pandemic fundamentally altered how societies function, forcing the government to speed up the digitization of many public services to limit disruption and guarantee that people may still use them without endangering public health and safety.

The nation's administration has acknowledged the potential the digital economy presents as a key socioeconomic engine and is now taking steps to further its objective of being a

regional leader in the sector. This is done through the Malaysia Digital Economy Blueprint, which intends to use Industry 4.0 (IR.4.0) applications to change Malaysia into a digitally driven country. The transition will raise Malaysians' quality of life, provide companies access to new market niches and possibilities, and allow the government to deliver more effective and efficient services (Bernama, 2022).

The digital economy is a new economic strategy for the twenty-first century that makes effective and efficient use of technical instruments to generate commodities at a reasonable cost. The cloud computing, internet of things (IOT), big data, mobility, and artificial intelligence are examples of digital tools used in the digital economy. Human capital's capacity to learn and adapt to change is substantially impacted by all the digital instruments discussed. The terms "Digital Economy" and "Industrial Revolution 4.0" are used to describe the developments. To guarantee that all the projects are carried out, the industrial revolution and the digital economy are developing along parallel paths. Naturally, there will be interference from human elements, which are crucial in helping us adapt to and align with these changes.

The introduction of new technologies has drastically altered human life. Although the development of new technologies serves industrial demands, some may also bring an awful chance to those who are unable to adapt to this transformation. Consider the influence of human resources. The transition to the industrial age is known as the Industrial Revolution 4.0. Five digital tool components (the internet of things, cloud computing, big data, mobility, and artificial intelligence) form the foundation of industrial 4.0. (Pereira & Romero, 2017). Based on the practice of digital competence profiling in the human resources industry, this research discusses the idea and significance of digital competency in the "Digital Age" for this section.

Competency is vital in the human resource context to determine the human capital's abilities and capabilities to support digital transformation. The traditional way of evaluating competency might be obsolete and may not be suitable in the 21st century, particularly addressing industrial 4.0, where new competency requirement is far more dissimilar from the traditional method. The traditional way of doing competency profiling is more stressful on personality, teamwork, function competency, and non-functional competency. Over the past 10 years, many studies have been conducted to prove that internal and external factors are significantly important in aligning employee competency and the industrial needs due to industrial shifts (Pereira & Romero, 2017). The practice of competency modeling and profiling has evolved due to the emergence of new technology that emphasizes cost-effectiveness and efficiency. Most of the practices are technologically based, and most of the model is derived from studying industrial behavior.

As a result of the enormous technology improvement, the public sector has conceptually enhanced service performance and governance to be more productive, ethical, visible, accountable, and participative. By delivering public services in a more effective, accessible, and responsive manner, increasing citizen engagement in decision-making, and making public institutions more visible and accountable, e-government aims to strengthen the relationship between citizens and their government (Bernama,2022).

According to the study conducted by Siti (2021), governments in developing nations are under pressure to implement e-government concepts in their public services because of the importance of e-government. For instance, in Malaysia, more public services, including application, payment, information, communication, procurement, voting, management, and customer service complaints, were developed in 2000 by using electronic methods. These innovative delivery technologies will alleviate traditional services provided over the mobile

and at a counter, saving time and money while allowing government employees to concentrate more on crucial responsibilities (Siti, 2021).

Conversely, not all nations have had an equivalent level of e-government growth. E-government implementation has been a failure in many developing nations. According to the United Nations e-Government Survey 2016, there are still 32 nations with a low E-Government Development Index (EGDI) rating, of which 29 are the least developed nations (United Nations, 2016). Over time, the e-government system was deployed in several emerging nations to enhance governance and public services (Siti, 2021).

There are two main reasons why government organizations need to go through a digital transformation, especially when e-government is deployed. Firstly, to improve governmental operations and public services. The next is to prepare the government for the tides of change brought on by Industry 4.0 and Society 5.0. It is critical to developing an innovative strategy for the government that uses the Internet of Things, Big Data, Artificial Intelligence, and Robotic Process Automation (Siti, 2021). Significantly, a considerable shift from the existing e-government towards the digital government is required to keep up with the changes in the intelligent information society. According to this report, the digital economy and the fourth industrial revolution both require digital proficiency.

Digital competency is the core element of the industrial revolution, and it is undeniable that human factors play a significant role in operating the machine and building and communicating with the machines. However, is it necessary to have digital competency? This rhetorical question gives researchers a glimpse of the need for digital competency in the 21st century. Not many studies in this context address digital competency and industrial revolution 4.0.

Emotional and competency study is significant for the organization; it is also vital for human resource practitioners to comprehend trends and market conditions. This study explained why digital competency is significant in supporting industrial revolution 4.0. Industrial revolution 4.0 is the transition in how industries enter a new phase of evolution. Industrial 4.0 is less reliant on the human ability to produce its output. It is all about connection, sensors, big data, mobility, storing, and artificial intelligence, which are critical elements in industrial revolution 4.0 (Pereira & Romero, 2017). In the 21st century, demand for digital tools is significantly increasing due to the industrial requirement that requires the business to be dynamic, adaptive, and effective. To serve this purpose, digital competency is imperative for employees and organizations to fully master competency (Pereira & Romero, 2017). Digital competencies are defined as the skills necessary to work in digital environments and manage electronic infrastructures and services (Khan & Bhatti, 2017). Ferarri (2012) described digital competency as the knowledge, skills, attitudes, and digital literacy needed to develop and manage digital information systems. Digital competency is significantly important for the digital economy, particularly in industrial 4.0. Brown (2014) explained that digital literacies” as a capacity to reflect on the nature of digital space concerning sustainability challenges and “digital ethics” as a capacity to reflexively engage with digital space in ways which build rich discourses around sustainability. Critically reflective and exploratory activities in digital space are a means of developing digital competency.

Aviram and Eshet (2006) described five main elements in measuring digital competency or digital literacy: - Photo visual literacy, reproduction literacy, hypermedia literacy, information literacy, and socio-emotional literacy. The importance of digital competency and digital literacy is to improve human talents to communicate and operate

with machines based on the required competencies. To do that, there many areas in digital competencies need to be considered without overlooking underpinning factors such as “Soft Skills” and human attributes (Aviram & Eshet, 2006).

The industrial 4.0 engine is running based on technological tools, which is far more advanced and consists of immense dichotomy compared to the previous industrial transition. Industrial 3.0 depends on traditional production with less interference from technological tools where the emergence of technology is still immature. Unlike industrial 4.0, most businesses operate virtually without human interaction and rely on sensors and big data analytics. To suit these changes, digital competency and digital literacy are essential to ensure employees and organizations survive with dynamic industrial and economic movements. This study can conceptualize and investigate the gaps based on the importance of digital competency in the 21st century.

Digital competency is the study's dependent variable and the study's output that needs to be further elaborated. The hypothesis development for this variable was based on the recommendations, suggestions, and findings from the previous studies related to the study's objectives. The digital culture has now altered how individuals acquire information, communicate, and learn. In this environment, digital competencies are critical for fostering continuous learning that is responsive to individuals' changing circumstances. The relevance assessments of digital competencies has grown in recent years in education research, resulting in the publication of several research articles on the issue (Cabero et al., 2021). Cabero et al. (2021) study discovered that females showed substantial differences in age and domains of expertise, whilst males did not, with gender differences being more favourable and significant for the female gender. On the other hand, in a study done by Grande et al.

(2020), gender variations in university stated perceptions were discovered. Men were more likely to see themselves as competent in using technology, with better information management and online collaboration abilities in digital media. In comparison, women reported using devices more often and conversing with social media, image and text processing, and graphic design.

2.2.1 Model of Digital Competence

The model of digital competence presented by White and Walker (2015) helps the researcher to understand digital competence with the need for industrial movement. Ahmed (2017) study also indicated that digital competence is measured based on the need of the current industrial movement. Concerning this, the model of digital competence developed by White and Walker (2015) considers the factors such as procedural competence, social, digital competence, digital discourse competence, and strategic competence. The domain of digital competence is vital for identifying, comprehension, and revamping the digital that is significant for the learner (Abdulteef & Khateeb, 2017).



Figure 2.1: Model of Digital Competence. Adapted from: Walker and White (2015)

In terms of digital competence, it is considered an essential component of the twenty-first century (Ferrari, 2013). It involves skills that exceed searching for information online and includes more demanding services and advanced expertise such as problem-solving, sharing, and collaborating with peers (Griffin, McGraw, & Care, 2012).

2.3 Past Related Studies on Digital Competency

Mastering digital competency is significant for survival in the 21st century. It contains more than just building up oneself with the aptitudes to use digital equipment to perform work and analyze big data, artificial intelligence, sensors, and mobility. Digital competency is divided into two domains: Digital tools competency and Digital literacy.

Digital tools competence is not described in terms of technical abilities to work with digital devices, tools, and the Internet, but rather as a collection of the knowledge, skills, and attitudes essential to develop into a functional user in a digital environment (Porat et al., 2018). Porat et al. (2018) underscore the need to organise training programmes to develop students' digital literacy in the Middle East environment, with a particular emphasis on social-emotional competencies.

Digital literacy is characterised as a range of cognitive, physical, emotional, and social abilities that enable individuals to operate spontaneously and effectively in digital environments for work, study, and daily operation (Calvani et al., 2012). Digital literacy is the capacity to locate relevant information and evaluate its dependability, interact successfully with unseen individuals (mainly via written text), and generate unique material in order to represent oneself in a manner that is consistent with one's personal or professional aspirations (Porat et al., 2018).

This study provides insight and the importance of digital competency in the Sarawak context. Of course, lacunae mainly address the empirical study in the Malaysian context, especially in Sarawak. This is due to the emergence of technological change and the new industrial revolution that dynamically impacted the research world.

A study by Calvani et al. (2012) stated that there are three concepts when assessing digital competency: Visual literacy, Trouble-shooting, and Understanding technological concepts. It was also shown that digital competency among young Italian is poor. Calvani et al. (2012) may overlook another significant element in digital competency in Industrial 4.0, such as big data analysis, the Internet of things, artificial intelligence, sensors, and mobility.

On top of that, the sample size is only restricted to the context of Italian teenagers. This study is developed based on the gaps to expand the area of digital competencies such as - emotional intelligence, digital literacy, and digital tools. These three main areas are also mentioned in Pereira and Romero (2017) and Brown (2014).

Enke et al. (2018) describe that the industrial revolution affects the current business model and directly affects the current competency model, particularly in manufacturing and IT firms. Many underpinning reasons drive the organization to develop a new digital competency model that suits industrial 4.0. Enke et al. (2018) also describe reasons for changing the current competency model due to the integration of digitalization of lean management parallel to the needs of industrial 4.0. Therefore, the current study needs to explore in-depth about this matter and provide a philosophical contribution to the State Government of Sarawak.

Abdulteeef and Khateeb (2017) revealed that most teachers are not adequately digitally competent according to the level and standards required in the middle east context.

Digital competence is associated with three knowledge areas that must be integrated: technology proficiency, pedagogical compatibility, and social awareness (Abdulteef & Khateeb, 2017). Based on the explanation of Abdulteef and Khateeb (2017), a study on integrated areas such as social awareness is correlated with the Goleman Mixed model (2000), which aims to identify the level of social awareness and social skills.

Cabero et al. (2021) conducted a study in the Spanish setting on the digital competence of higher education instructors and have discovered substantial disparities in scores across educators in many areas of expertise for each gender. The outcomes of this research emphasise the dearth of digital training for instructors of both genders.

In contrast to Guillen-Gamez et al. (2021), the findings indicated that there were no statistically significant variations in the degree of digital competence of teaching staff between the genders. A study carried out in the Spanish setting by Jorge-Vázquez et al. (2021) also revealed that there are no significant disparities in the average level of digital skills of university professors according to gender.

Another study in Pakistan (Khan & Bhatti, 2017) stated that training in Digital competency is significant for an employee to develop new digital skills aligned with the industrial movement. A study by Khan and Bhatti (2017) on librarians in Higher Education Commissioner Pakistan showed that digital competencies are essential for the librarian to protect digital content and manage the digital library and resources.

According to the study in Malaysia context by Khan et al. (2021) on Driving Digital Competency Model Towards IR 4.0, Malaysia showed that the work environment alters job profiles, necessitating the need for personnel with a diverse set of abilities. Today, digital inclusion is mainly determined by capabilities rather than access to tools. The research by

Khan et al. (2021) also examines the link between digital competence and employment in Malaysia and the necessary skills. According to the report, most Malaysians have little or no digital skills. Because of these problems, most workers and graduates cannot satisfy industry requirements.

According to Zulkarnain et al. (2021), It was noticed that respondents had the lowest levels of success when it came to developing digital content. According to statistics, respondents) lack the capacity to build programming codes and can only develop material and incorporate and re-elaborate digital content on a medium level. Additionally, respondents demonstrated an average understanding of how material and content are protected by copyright and licencing.

Additionally, the results are consistent with Khan et al. (2021) research, which demonstrated a lack of digital proficiency in the Malaysian environment. This is also compatible with Kassim's (2021) research in the Malaysian setting, which demonstrated a variation in the capacity to manage computers, networks, and hardware and a grasp of how to handle formal computer and network features.

2.4 Issues to be Addressed, Empirical, Theoretical and Practical Discussion

In this section, the discussion begins with analysing the broad issue in digital competency followed by the issues based on empirical, theoretical, and practical evidence from previous emotional intelligence studies. Then followed by conclusion of the issues to be addressed in the study. This section is significant to justify the concrete factors on the purpose of the study that is aligned with the statement of problem and research objectives.

2.4.1 Issues in Digital Competency

The past few years have seen an extraordinary workplace change rate due to the development of new digital technologies. Asnidatul and Razali (2019) noted that industrial revolution 4.0 (IR 4.0) has greatly increased ambiguity. Therefore, some analysts think that this change will lead to the creation of new positions while also eliminating some. Despite the contentious arguments around IR 4.0 and digital transformation, the focus of all talks is on the need to establish acceptable ideas for professional training and qualification, particularly vocational training (Asnidatul & Razali, 2019). Given this, the fundamental idea would be to determine which competency would be necessary for the future and how to acquire the necessary ability. Importantly, even for businesses with decades of expertise, IR 4.0 provides a fresh challenge in the wake of introducing new automation technologies.

Many important aspects of the IR 4.0 transition are currently impacting global sectors and having a considerable influence on jobs, including significant job creation, job displacement, increased labour productivity, and growing skill gaps (Siti, 2021). As a result, there are still many questions about how job profiles will change in the future in response to these issues in vocational education and training to ensure that graduates can do jobs at a specialized level with high quality.

All employees will adopt these digital tools and technologies as IR 4.0 takes root. As a result, the public sector needs innovative employees to produce higher-quality goods and services in a way that can swiftly change industrial needs, foster people's needs, and increase market share. Employees are primarily affected by IR 4.0, such as innovative ways to boost the smartness of industrial facilities, even if they are not just required to develop procedures and operations to meet these new advancements. In IR 4.0, the employee must be open to

change, exhibit greater flexibility to adapt to new roles and work situations and be acclimated to and optimize step-by-step advice and instructions for digitization (Asnidatul & Razali, 2019).

Notwithstanding all of the obstacles, IR4.0 is predicted to bring about a number of opportunities, including the creation of new business models, the creation of new employment, and the development of skills to meet the demands of the next technological revolution (Asnidatul & Razali, 2019). Consistent with all the debates in IR 4.0, all of these developments need the implementation of new teaching methodologies and learning technology, including the digitization of training institutions' advanced working experiences (Siti, 2021). Individual competency is also essential to ensure a position in the new workplace environment throughout the change.

Nonetheless, the fundamental problem in the present situation is that current civil service and graduates lack the necessary skills to satisfy the IR 4.0 criterion. According to Asnidatul and Razali (2019), all developed countries would see employment losses with a concerning rate of up to 47% over the course of the next 25 years. This is due to the difficulty in locating individuals with the necessary combination of technical, analytical, and industrial expertise, as well as commercial acumen and soft skills to transform data into value for the organization.

In Malaysia's context, Malaysia must be ready for the next digital economic era to be a truly knowledgeable nation. Malaysian industries must adapt to the rapid technological developments affecting their operations to prosper in the digital age. For the industry to stay competitive, improvements must be considered. Despite difficulties in finding high-skilled jobs for the local population, Malaysia's graduates saw a 10.7 percent unemployment rate in 2015, more than three times the country's 3.1 percent jobless average (Khan et al., 2021).

The mismatch between the available programmes and market demand contributes to this. Because higher education institutions are now not providing the necessary skills, Malaysian graduates are less employable (Khan et al., 2021).

Emerging globalization trends and the COVID-19 pandemic have disrupted business operations across the board, whether in the public or private sector. While the commercial sector was negatively impacted by a significant decline in income and profit, the public sector suffered from operational dysfunction in the delivery of public services (Asnidatul & Razali, 2019). The level of public participation involvement in Malaysia is still at an inadequate and minimal level, particularly when it comes to shared consultation at the local government level of decision-making, collective arrangement, and the creation of local public policies and plans for some of the local councils in Malaysia (Halimah et al., 2022). This event arose because individuals did not understand the value of public engagement and the many participation processes that may be used. The low level of public engagement hampers the government's ability to make decisions and carry out its duties.

According to Halimah et al. (2022), the rapid growth of e-participation initiatives from all levels of government is generally regarded as having failed to achieve the desired results due to the inability to adequately prepare for the targeted user, which led to user unreadiness issues and in some ways unfulfilled the desire to attract the targeted members of society towards a more digitalized society. High non-relevant costs, such as the improper use of public funds, missed opportunities, unrealized profits, and loss of public trust, are quite likely to underlie these failures.

In the context of Malaysia's civil service, civil servants must perform effectively. Thus, the delivery of public services is undergoing a digital transition. Unfortunately, there is still a dearth of agility among civil servants. Siti and Hasliza (2022) state that digitalization

encompasses information, computation, technology, processes, and people. Despite the rapid advancement of information technology, people and government officials still prefer to work and conduct business in a conventional way, manually and in person. Therefore, for the digital government agenda to be successful, government employees and the general public especially the business community must become accustomed to using online services. via digital government (Siti & Hasliza, 2022).

Prime Minister Tan Sri Muhyiddin Yassin (2021, as cited in Siti & Hasliza, 2022) expressed his concern that the long-standing practices in the public sector and the way civil servants conduct their work are no longer appropriate and must be reviewed in order to promote the development of the nation. The transformation of public service delivery through digital government demanded that civil servants had technical expertise since they would not only be handling the technology but also serving as the government's representatives in educating the public. The transformation of public service delivery through digital government demanded that civil servants had technical expertise since they would not only be handling the technology but also serving as the government's representatives in educating the public.

The capacity of government officials to use technology effectively is still lacking. This is quite obvious, especially after the global COVID-19 outbreak. The tsunami of e-learning, virtual meetings, and video conferences rocked the world, including public officials who had been "sleeping," which surprised many. Clearly, public officials' digital literacy abilities and talents are not prioritized across a range of technology. Additionally, the current service model does not advance the goal of digital government (Siti & Hasliza, 2022). Therefore, this study is required to uncover the practical issues and concerns related to digital competency, emotional intelligence, change readiness and align them with the government

agenda to answer the concern related to digital competency among the civil service in Malaysia.

2.4.2 Empirical Discussion on Emotional Intelligence

No doubt pandemic, economic slowdown and industrial 4.0 have affected many industries around the globe. The employee is also poorly affected due to changes in operation, demand, needs and skills in the 21st century. Thus, emotional intelligence is vital to managing behavioural factors in the working environment. In this study, empirical evidence from previous related studies will be used as a basis to analyse the significance of emotional intelligence study in the workplace and align it with the current study direction to draw robust justification for the needs of this study.

In the industry context, emotional intelligence is defined as the capacity to deal calmly with workplace emotions. Goleman (1995) defined self-awareness in four essential domains: social awareness, self-awareness, self-management, and relationship management. Numerous research undertaken in various circumstances has shown that emotional intelligence is necessary for effective performance and the development of a new set of competencies (Supramaniam & Singaravelloo, 2021). Previous empirical findings allow the current study to explore other dynamic factors that might influence the level of emotional intelligence in the public sector. The current study assesses the need for other related factors such as organization change readiness as part of the catalyst that influences competency. Salovey and Mayer (1990) stated that emotional intelligence should emphasise human behaviour and the environment. However, according to another research by Goleman (1995), behaviour and work environment alone are inadequate to prepare employees for changes in organisational structure and working tools. Due to conflicting views, the great debate

continuously offers new paths for researchers to understand the dynamic factors that affect emotional intelligence and related factors.

An emotional intelligence profile or research should be a stand-alone variable that may aid organisational change and skill development. In a dynamic world, a stand-alone area of study cannot coexist. As a result, challenges with poor adaption and emotional intelligence arise; this is shown in the Norshidah (2011) and Rahiman et al. (2020) study. Due to a lack of understanding, emotional intelligence profiling for organisational preparedness for change and digital competence is still absent. Allaoui and Benmoussa (2020) emphasised the role of emotional intelligence in managing perception, stating that people's good feelings about organisational transformation will help the change succeed. According to Allaoui and Benmoussa (2020), individual elements are more essential than others. Given these concerns from past empirical studies, emotional profiling shapes employee thought on how individual view adapts to the change agent and develops a required skill that is in tandem within the ecosystem.

Lee (2018) noted that while recruiting new employees, emotional intelligence evaluations, including emotional self-awareness and emotion regulation, should be used to identify potentially productive job prospects. This empirical evidence can be used to benchmark emotional intelligence studies in Malaysia. Emotional intelligence should be embedded from day one of the recruitment exercises until the end of the service. Emotional intelligence should be operationalized in human resource development as part of recruitment, staffing and career development. Besides that, public organizations should provide ongoing emotional intelligence training and development to their employees. The missing element may result in fatigue and unhappiness among public employees when

confronted with change or transformation objectives that require them to acquire new capabilities.

Pandemic causing operational interruption and emotional discomfort for many entities, especially in meeting end-user needs. In the context of civil service, the end-user is the citizen. Empirical findings by Supramaniam and Singaravelloo (2021) mentioned that as organisations and countries become increasingly linked, government officials are obligated to offer and function on a global scale to fulfil stakeholder expectations. Because of these concerns, Supramaniam and Singaravelloo (2021) also concluded in their research that government employees operated in an unusual way during the pandemic, disregarding the bulk of well-planned studies and concepts and relegating them to insignificance. Considering these concerns, the ecosystem forces mundane business to disrupt, poor operation and affecting human behaviour. Without high emotional intelligence, the employee could experience burnout and poor motivation. Thus, an emotional intelligence study is significant and can offer to evaluate the whole situation and issues related to emotional intelligence breakdown.

According to Olson et al. (2019), emotion management is the process by which an individual uses their abilities to regulate their own and other people's emotions in a social situation. Olson et al. (2019) also revealed a distinction in emotion control based on social interaction and psychodynamics. Both Olson et al. (2019) and Supramaniam and Singaravelloo (2021) studies agree that emotional intelligence is the basis for coping with environmental changes and individual adaptation. In this study context, emotional intelligence is used as a basis to cope with changes and a new set of competencies.

Emotional intelligence can cause leading factors in employee motivation, competency and performance. As a result of the VUCA (Volatility, Uncertainty, Complexity and Ambiguity) environment and the impact of the pandemic, many employees in public sectors are affected in terms of work performance and motivation. Tharbe et al. (2021) study indicated that emotional intelligence abilities might operate as a shield against the negative impacts of emotional stressors, allowing the person to deliver effective care while maintaining their psychological well-being. Thus, perception of the emotion domain not only detects the ability to perform a job and competency; it can also be used to define individual ability in motivation to lead. Hatta and Abdullah (2020) agreed that high levels of emotional intelligence would result from high work performance and motivation.

There is an assumption in this study to investigate how emotional intelligence influences competency and how emotional intelligence reacts to the changes. At this juncture, there is a lack of evidence to support the assumption, especially in the micro context. Previous research complements the current study to explore and connect all the dots to draw the study's conclusion. However, empirical evidence from macro and micro perspectives helps the current study address the issues and concerns pertaining to emotional intelligence study. By integrating the empirical findings from previous studies in this study, a new view evolved to explore possible exit to the issues and concerns stated in this study.

2.4.3 Theoretical Discussion on Emotional Intelligence and Related Variables

Synthesizing theoretical evidence and practicality is always an issue for many social science research studies. The theoretical discussion provides a strong indicator for research to explain the procedure and operational method based on the field of study.

There was much discussion and criticism around applying the emotional intelligence theory. According to Lindebaum (2009), the ability model is a dual framework for assessment. There is evidence to believe that emotional capabilities develop as individuals mature. For instance, scholars have shown that overall emotional intelligence or specific areas correlate significantly with age (Mayer, Caruso, & Salovey, 1999). By contrast, a lack of evidence of an age-related increase in trait Emotional Intelligence has been discovered in studies using trait emotional intelligence measures (Lindebaum, 2009). The following arguments are intended at the empirical evidence that emotional intelligence increases with age as measured using a capacity scale. The essential mechanism is still somewhat obscure (Zeidner et al., 2004). Lindebaum (2009) also said that the ability model, emphasising emotional and intellectual growth, may serve as a vehicle.

Intellectual growth alone may not be sufficient, especially adopting the model or theory that is only used for assessing psychological and social factors. The emotional intelligence model or theory should be able to integrate with dynamic environments and changes. This study views from a theoretical perspective are essential due to core operationalize the model and theory from previous seminal studies. The question may arise “Is the previous model or theory able to operationalize and conceptualize today's issue or concern?”. Some emotional intelligence model or theory was developed based on individual and psychological factors. Thus, merging the domain requires robust study and sufficient data collection.

Lindebaum (2009) hypothesises that typical or favoured behavioural patterns (i.e., EI as a characteristic) seldom result in this. Progressive emotional and intellectual growth involves changing away from preferred modes of behaviour, especially if they have

previously been shown to be harmful or harsh. For instance, the prospect of rejection from a social group may be unpleasant, prompting individuals to conceal their emotions.

From the theoretical perspective of theory or model integration, it is significant to synthesize other models or theories from other fields of study. Particularly in explaining other related factors that may contribute to emotional intelligence. Vaughn's (2018) study applied open system theory as an underlying theory to explain the impact of emotional intelligence on executive coach performance in an organization setting. The employee is an essential element of the system, and knowing how they are affected is important for both successful development and the general health of the organization. The emotional intelligence model alone is not able to explain the external variable such as change process, organisational development issues and workplace issues (Lindebaum, 2009). The model Goleman (1995) developed on emotional intelligence, also known as a mixed model only, can be used to assess emotional intelligence in the workplace.

On top of that, the Goleman model is only for assessing individual emotional intelligence. On the other hand, the ability model by Salovey and Mayer (1990) only assesses from the psychological perspective where many factors may influence emotional intelligence. There are lacunae to adopting a single model to explain the whole structure of the variable involved in the study.

This study's direction is derived from the statement of problem where the issues are twofold that influence emotional intelligence: the readiness for change and digital competency. Explaining the constructed flow using one single theory or model is imperative in this study. Thus, evidence from a theoretical perspective from previous seminal studies is significant to synthesise with the study objective.

To strengthen study justification, an open system will be used to explain the study's connection based on the variable involved. Another theory explaining this study is the Model of Organizational Change by Lewin (1951) and the Digital Competence Model by Walker and White (2015). The underlying theory and sub-model application details will be discussed further in the related theory and model section.

The model of organizational change is widely used in social science research to explain the change process within the organization. However, there are limitations where the change model may only explore from the perspective of process and resource. In this study, the model of organisational change will be used to explain the interaction of emotional intelligence and organizational readiness for change. Thus, the sub-model in the study is essential to explain and operationalize the related variable in the study and use the underlying theory as the more extensive umbrella to explain the whole related constructs. In terms of systems theory, Maes and Hootegeem (2020) justified that system theory is vital for organisational reform. Both subsystems (production, accounting, administrative systems, HR systems, and so on) and aspect systems can be found in an organisation (hierarchic relations, data flows, etc.). The model implies that change management is a subsystem within the business that serves a defined purpose, similar to how the HR system serves its purpose. Because of technological, social, economic, and political advances, the ecosystem's structural complexity is expanding (Norshidah, 2011).

The following sub-variables involved in the study are digital competency; the model of digital competence by Walker and White (2015) is used to explain the related digital competencies that are required to be assessed. The digital competence model profiles digital

knowledge, skills, and ability. The digital competence model is a functional competency that requires integration to operationalize the concept in the study.

Bradley (2014) asserts that the competence model created based on system theory enables researchers to conduct in-depth examinations of individual capacity within an organisational setting. From a human resource viewpoint, an input element might be an individual's ability to engage with a transformation element, resulting in human resource output, which is the competence in Bradley's (2014) research. Jacobs' (2014) study on the application of open system theory to human resource development discovered that the open system process for human capital development begins with an input element that measures "AS IS" or current ability and interacts with organisational activities to produce competency or performance individual.

This study will provide theoretical implications for integrating open systems and other sub-models. This is aligned with the statement of the problem and objective of the study. Therefore, discussing the theoretical perspective is imperative to understand how it synchronises with the study's objective.

2.4.4 Practical Discussion on Emotional Intelligence

The impact of the pandemic caused an economic slump resulting in a high unemployment rate, productivity, and performance. A vicious cycle causes the industrial revolution 4.0 to create a new shift and narrative in the job market and demand. The impact of two significant events, the pandemic and the industrial revolution, has forced the government and industries to explore new ways to operate in a dynamic environment. Exploring new potential areas requires government and industrial efforts to improvise and

develop new competencies required to suit the changes. It is unavoidable and unfortunate for industries that cannot adapt to the changes.

According to the data provided by Statista (2020), the global unemployment rate increased to 6.47 percent in 2020 compared to 2019 with 5.37 percent and many countries affected due to the impact of the pandemic, and many countries showed a significant decrease in gross domestic product.

The government, industries, and experts explore potential sustainability and well-being areas to resolve this issue. This does not come without cause and effect on human capital. The repercussion of pandemic and industrial shift lead to the dawn of the digital economy and digital government as a transformation platform. According to the United Nations (2021) worldwide digital economy report, all nations participating in the digital economy must prioritise education policy and seek to improve data literacy, digital skills, and data talent.

The United Nations' (2021) report also indicated that there are substantial shortages of these talents in several emerging nations, particularly in Asia. It is critical to prioritise innovation and industrial strategy to advance the digital economy. These factors will contribute to their economies' capacity to add local value to data and grow.

This transformation agenda has created opportunities and threats in many countries and industries. From the perspective of civil service, introducing change is always the biggest challenge for the government. Especially involves humans, in this context is the human resource.

A study by the Global Economy (2021) indicated that the average Public Civil Service Index for 2021 based on 173 countries was 5.67. The indicator "public services" refers to the existence of fundamental governmental operations that benefit the public. This may include vital services such as health, education, water and sanitation, transportation infrastructure, energy and power, and internet and connection. On the other side, it may refer to the state's perceived capacity to protect its population from terrorism and violence via efficient police. The greater the indicator's value, the worse the country's public services are. In 2021, Malaysia's Public Civil Service index was 4.30.

On the other hand, Malaysia's fragile state index indicates that the country's index point for 2021 is 56.9. The Fragile States Index quantifies vulnerability in pre-, during, and post-conflict settings (The Global Economy, 2021). The index is composed of twelve conflict risk indicators that are used to assess a state's current condition: security apparatus, factionalized elites, group grievance, economic decline, uneven economic development, human flight and brain drain, state legitimacy, public services, human rights and the rule of law, demographic pressures, refugees and internally displaced persons, and external intervention. The greater the index value, the more "fragile" the nation (The Global Economy, 2021).

The Public Service Index and The Fragile States Index have shown that Malaysia's government needs to straighten the service delivery to the people. Civil servants significantly ensure the "Rakyat" or people receive the service and proper infrastructure, creating endless demand from the public. According to Lee (2018), those who work in public service need greater emotional control since they interact with residents, and individuals often seek governmental assistance during their darkest hours.

This emotional labour may result in a greater risk of burnout and job dissatisfaction. Notably, burnout and job satisfaction directly correlate with organisational outcomes such as a desire to leave, absenteeism, work performance, and service quality. Poor organizational outcomes may have a detrimental effect on the end-users quality, consistency, and stability, resulting in significant organizational challenges (Lee, 2018).

On the other hand, good attitudes and emotions among public sector professionals may contribute to a pleasant work environment, increased job satisfaction, and a favourable image among people. Thus, this is direct to the crux of this study's subject on emotional intelligence. Emotional intelligence has been in the research world for many decades and has undergone a revolution in practices and methodology.

Sadovyy et al. (2021) stated that workers with a high emotional intelligence had the best levels of efficiency and the fewest unproductive work behaviours, especially in the stressful working environment caused by pandemics and digital transformation. Compared to those with low emotional intelligence, they will show greater workplace stress levels.

2.4.5 Conclusion of the Issues to be Addressed

The increased focus on digitalization in the public sector necessitates an effective and efficient delivery of public services. As a result, public servants' emotional intelligence is critical in bolstering the effectiveness of governmental organizations during these circumstances. Goleman (1995) defines emotional intelligence as the capacity to recognise, access, and produce emotions to facilitate the development of associated thinking. It is the capacity to comprehend emotions and the information they create and the capacity to manage emotions further to enhance intellectual development.

There are numerous debates on the practicality of emotional intelligence in a digital ,dynamic work environment and competency (Goleman, 1995; Supramaniam & Singaravelloo, 2021). They were especially facing volatile, uncertain, complex, and ambiguous ecosystems. The industrial transition and impact of pandemics force civil service to be more emotionally competent and develop new digital skills for the sustainability of the public service. This is also mentioned in Lee's (2018) study in the Korean context explained that civil servants will have to face a more significant emotional challenge if they do not improve their emotional intelligence when dealing with the public.

According to CEUPACS (Bernama, 2019), more than 400,000 civil servants experiencing emotional instability in Malaysia may lead to stress, depression, and psychological issues at the workplace. This happens due to the demand of the public and transformation agendas. The issue here is the practicality of embarking on or promoting change that may influence the adaptability of civil service. Not only that but new sets of competencies are also required to please the public demand.

There are lacunes in today's practice especially integrating emotional intelligence with organizational behaviour, organization development and human resource development. This is because of the pleased transformation agenda that comes with change readiness and the development of new digitisation skills, especially in the new industrial revolution that focuses on the digital economy and government agendas. This creates uncertainty and insecurity for a civil servant to cope with the dynamic environment. Thus, this study explores and offers emotional intelligence as a remedy to improve digital competency, readiness and performance in civil service.

2.5 Understanding the Concept of Emotional Intelligence

In the era of first industrialization and the late 20th century, several scholars and studies showed some interest in psychology investigating emotional intelligence. Carl Jung's study in 1921 (Steiner, 1984) describes that an individual used some feeling function to comprehend the world and think with the heart. Steiner's (1984) study suggested the existence of emotional literacy concerning how literate humans, when assessing it, are on emotion and aware of what is happening around them. Steiner's (1984) study also discusses emotion and awareness to improve individual well-being in society.

In later years, Salovey and Mayer (1990) describe emotional intelligence as the mental ability to understand its own emotion to suit themselves with situational to make conclusions or decisions. Salovey and Mayer's (1990) study discusses the concept and first model developed by Salovey and Mayer (1990), explaining the nature of Emotional intelligence that can be used to promote intellectual growth.

Goleman's (1995) study on emotional intelligence emphasises emotion, brain function, and social behaviour to help children develop their emotional and social skills. Goleman (1995) also investigates how emotional intelligence becomes the factor that influences individuals and society. The evolution in emotional intelligence study started from “curiosity to understand” human emotion and how its influence individual and society. In 20 century, psychologists started to explore the other underpinning factors that may contribute to the field of emotional intelligence and its application in any field.

The evolution of emotional studies continues after 20 years by many psychologists around the globe. Schutte, Malouff, and Bhullar (2009) conducted a seminal study evaluating the emotional scale based on the novel model developed by Salovey and Mayer (1990). The

instrument was developed to comprehend emotional intelligence in-depth and link it with social and work requirements.

In the early year 2000, a study by Schutte et al. (2009) assessed an emotional intelligence scale based on the model developed by Salovey and Mayer (1990). Schutte et al. (2009) study explained the critical area of the emotional intelligence domain based on Goleman's (1995) and Salovey and Mayer's (1990) study. Schutte et al. (2009) study aimed to assess emotional intelligence characteristics and achieve high validity and reliable scale of emotional intelligence.

In a nutshell, the origin of the emotional intelligence study was derived from personality and emotions studies and models. Emotional intelligence is significant for individuals to suit themselves with the social environment and workplace environment, especially competency and work performance. Thus, emotional intelligence is a significant contributing factor to employee competency.

2.5.1 Bibliometric Analysis of Emotional Intelligence Studies

A growing number of emotional intelligence research help individuals, organisations, and academicians explore and understand more about emotional intelligence. However, few studies in emotional intelligence cover specific regions, contexts, and cultural needs. In this study, bibliographic analysis from past research ensures the study's relevancy and validity are up to date with its requirements.

According to Krishnan et al. (2020), The increase demonstrates that the notion of emotional intelligence was attracting the researchers' attention. However, most of these articles are not publicly accessible and need payment to access the information contained

therein. It is clear from examining the topic area that the research field is vast, and many studies are conducted internationally. The topic area analysis revealed that psychology is the primary focus of emotional intelligence study. This is corroborated by the total number of articles grouped as follows in Figure 1: Psychology with 1726 articles, Social Sciences with 1359 articles, Business Management and Accounting with 897 articles, and Arts and Humanities among the disciplines covered 369 articles.

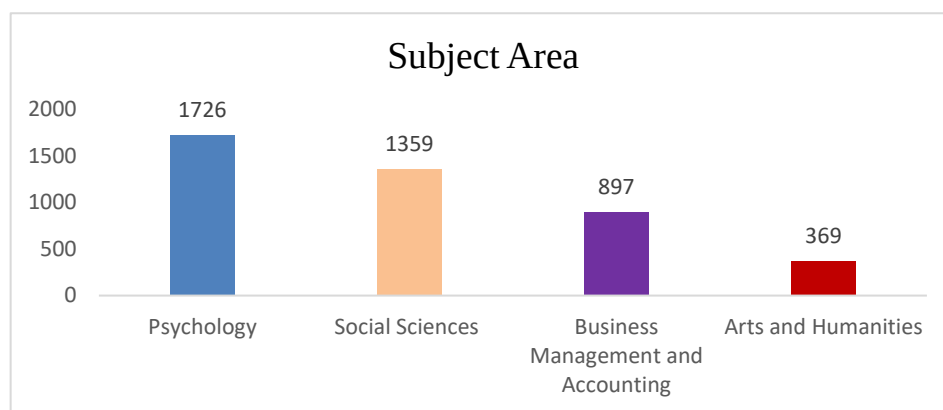


Figure 2.2: Distribution of Document by Subject Area. Adapted from: Krishnan, Siti, and Zakuan (2020).

2.5.2 Top Ten Occurrence Keywords

Considering earlier emotional intelligence studies, there is an opportunity to follow and identify current human emotional intelligence competency developments by utilising highly relevant keywords from the Web of Science, the most trustworthy international abstracting and indexing database (WOS). Based on table 2.2, the top search occurrence keyword is Emotional intelligence, with the occurrence of 2449, followed by emotions keyword with the occurrence of 179, personality with the occurrence of 164, trait emotional intelligence with the occurrence of 159, emotional in adolescence with the occurrence of 145, leadership with the occurrence of 144, gender with the occurrence of 105, Stress with

the occurrence of 92, job satisfaction with the occurrence of 88 and intelligence with the occurrence of 85.

Table 2.1 : Total Link Strength of Top 10 Occurrence Keywords

Rank	Keywords	Links	Total Link Strength	Occurrences	Average Per-year
1	Emotional Intelligence	367	3989	2449	2013
2	Emotions	144	418	179	2012
3	Personality	157	457	164	2011
4	Trait Emotional Intelligence	137	342	159	2014
5	Adolescent	105	345	145	2014
6	Leadership	102	298	144	2011
7	Gender	93	260	105	2013
8	Stress	87	253	92	2013
9	Job Satisfaction	65	193	88	2014
10	Intelligence	80	205	85	2009

2.5.3 Top 10 Most Prolific Authors in Emotional Intelligence

The emotional intelligence field of study emerged in the '90s, starting with the seminal study by Salovey and Mayer (1990). Later, the research attracted attention to collaborating the study in social sciences, human resource development, arts and medicine. The emotional intelligence study done in the western context is growing yearly and producing highly competent research in the emotional intelligence study. This study will detail the top 10 most prolific authors in emotional intelligence. This is due to the validity of the dominant study and the author currently leading in the emotional intelligence study. According to Krishnan, Siti, and Zakuan (2020), the top-ten prolific author in emotional intelligence study is led by Petrides from the United Kingdom with an h-index of 35, followed by Extremera from Spain with an h-index of 20, Berrocal from Spain with an h-index of 18, Furnham from Norway with h-index of 22, Saklofske from Canada with h-index

of 17, Nicole Schutte from Australia with h-index of 18, Salovey and Peter from Japan with h-index of 23, Stough from Australia with h-index of 16, Elizabeth Austin from the United Kingdom with h-index of 18 and Robert from the United States of America with h-index of 15. The data are shown based on current affiliation in the country, based on the research findings by Krishnan, Siti, and Zakuan (2020). While the total citations are in the United Kingdom, Norway, Australia, and Japan.

Table 2.2 : Most Prolific Authors

Rank	Author	Year of 1st publication*	Total Publications	h-index	Total Citations	Current affiliation	Country
1	Petrides, Konstantinos V.	2000a	71	35	5109	UCL Institute of Education, London	United Kingdom
2	Extremera Pacheco, Natalio	2002a	47	20	1183	Universidad de Malaga, Malaga	Spain
3	Berrocal, Pablo Fernández	2002b	40	18	967	Universidad de Malaga, Malaga	Spain
4	Furnham, Adrian F.	2000b	33	22	3229	Norwegian Business School, Oslo	Norway
5	Saklofske, Donald H.	2003a	32	17	1425	Western University, London	Canada
6	Schutte, Nicola S.	1998a	30	18	2666	University of New England Australia, Armidale	Australia
7	Salovey, Peter	1990c	28	23	5705	Tohoku University, Sendai	Japan
8	Stough, Con	2001b	25	16	1221	Swinburne University of Technology, Melbourne	Australia
9	Austin, Elizabeth J.	2003b	24	18	1775	University of Edinburgh	United Kingdom
10	Roberts, Richard D.	1998c	24	15	1871	Rad Science Solution, Philadelphia	United States

2.5.4 Top Cited Articles

Based on Table 2.3, ranking top number 1 cited article is from Schutte, Malouff, Hall, Haggerty, Cooper, Golden and Dornheim in the year 1998, the articles entitle “Development and validation of a measure of emotional intelligence with a total citation of 1372, followed by Picard, Vyzas and Healey in the year 2001 the article entitled “Toward machine emotional intelligence: Analysis of affective physiological state”, Third by Mayer, Caruso and Salovey in the year 1999, the article entitled “ Emotional intelligence meets traditional standards for an intelligence”, Wong and Law in the year 2002 the article entitled “ The effects of leader and follower emotional intelligence on performance and attitude: An exploratory study” and Baer, Smith and Allen in the year 2004 the article entitled “Assessment of mindfulness by self-report: The Kentucky inventory of mindfulness skills.”

Table 2.3: Top 5 Cited Articles

Rank	Article	Total Citations	Journal	Author/s	Year	Average number of citations per year
1	Development and validation of a measure of emotional intelligence	1372	Personality and Individual Differences	Schutte, N.S., Malouff, J.M., Hall, L.E., Haggerty, D.J., Cooper, J.T., Golden, C.J., Dornheim, L.	1998	69
2	Toward machine emotional intelligence: Analysis of affective physiological state	1247	IEEE Transactions on Pattern Analysis and Machine Intelligence	Picard, R.W., Vyzas, E., Healey, J.	2001	73
3	Emotional intelligence meets traditional standards for an intelligence	1115	Intelligence	Mayer, J.D., Caruso, D.R., Salovey, P.	1999	59
4	The effects of leader and follower emotional intelligence on performance and attitude: An exploratory study	995	Leadership Quarterly	Wong, C.-S., Law, K.S.	2002	62
5	Assessment of mindfulness by self-report: The Kentucky inventory of mindfulness skills	945	Assessment	Baer, R.A., Smith, G.T., Allen, K.B.	2004	68

2.5.5 The Top 10 Most Productive Academic Research in Emotional Intelligence

Table 2.4: The Top 10 Productive Countries and Academic Institutions in Emotional Intelligence Publications

Rank	Country	Total Publications	Single Country Publication (%)	The most productive academic institution	Total of a Given Academic Institution
1	United States	1103	75.61	Yale University	45
2	United Kingdom	504	59.92	UCL	97
3	Spain	418	77.51	Universidad de Malaga	81
4	Australia	301	70.00	The University of Sydney	37
5	Iran	265	87.92	Islamic Azad University	49
6	Canada	204	50.00	Western University	45
7	India	194	90.72	Vellore Institute of Technology, Vellore	11
8	China	132	62.88	Beijing Normal University	19
9	Malaysia	132	73.48	Universiti Putra Malaysia	34
10	Italy	108	57.41	Università degli Studi di Firenze	27

Table 2.4 depicts the top 10 most productive publications in emotional intelligence research. The first ranking of the country that produced the most publication is in the United States with full publications of 1103, and the most productive institute is Yale University, second-ranking is followed by the United Kingdom with total publications of 504 In University College London, followed by Spain, with total publications of 418 in Universidad de Malaga, Australia, with a total of publications of 301 in The University of Sydney. Ranking number 5th is in Iran with total publications of 265 in the Islamic Azad University, Canada, with total publications of 204 in the Western University, India with total publications of 194 in the Vellore Institute of Technology, China with total publications of 132 in the Beijing Normal University, Malaysia with total publications of 132 in University Putra Malaysia, and the number 10th on the list followed by Italy with 108 total publications in the Università Degli Studi di Firenze.

Emotional intelligence is a rapidly expanding discipline that affects almost every aspect of life. As a result, researchers with various educational backgrounds research emotional intelligence is being conducted.

The study's practical implications concentrate upon academics and practitioners applying emotional intelligence ability and trait modelling tools in the professional environment of an organisation or institution. The study in bibliographic analysis in emotional intelligence helped the current study to determine the seminal study, leading author in emotional intelligence, a mixed area of the study, high impact journal and article and the most-cited journal.

In summary of the bibliographic analysis provided in this study, it is shown that the field of study exploring research in emotional intelligence is psychology, while the top leading authors in emotional intelligence are from total citations in the United Kingdom, Norway, Australia, and Japan. A top prolific author in the emotional intelligence field is also referred to in this study as the basis of literature to explore emotional intelligence in depth. Top cited articles ranked number 1 in the emotional intelligence study are led by Schutte, Malouff, Hall, Haggerty, Cooper, Golden and Dornheim in the year 1998, also cited in this study as part of the instrument development. While top countries and institutions produce, emotional intelligence research is led by the United States with total publications of 1103 and dominated by Yale University. Bibliographic analysis helps the current study comprehend the pattern of emotional intelligence research and robust reference in emotional intelligence.

With the firm foundation of literature in emotional intelligence research, this study is expected to explore in great depth of understanding and connect to the real issue in human resource development and research gaps in the study. Knowing and owning the emotional

intelligence study is vital to ensure the literature addresses the study's objective and contributes to the body of knowledge.

2.5.6 Emotional Intelligence Model of Performance

In the 90s, Goleman (Fernández-berrocal & Extremera, 2006) presented his emotional intelligence model linked to work performance. In Goleman's study, it is stated four principal domains in the model, namely: Self-awareness, Self- Management, Social Awareness, and Relationship Management. Goleman (2000) refined this model in the year 2000 after a further study conducted by his colleague Richard Boyatzis (Daniel Goleman, 2000). Goleman's (2000) model of performance significantly focuses on workplace emotional intelligence, which is suitable for the current study. In many studies, Goleman's model was adopted in the European context to comprehend leadership and organizational performance (Goleman, 2000). The findings showed a positive result for the leader and performance. McClelland shows the consistent finding for employee performance and leadership in 1998 and Boyatzis, Goleman, and Rhee in 2000 (Goleman, 2000). In the context of Sarawak Civil Service, selecting the model is essential to ensure the model's adoption meets the study required. Model of performance is much related from the perspective of “emotional intelligence at workplace and competencies”. Similar adoption may result in high reliability of the findings, particularly addressing employee emotional intelligence and competency.

Table 2.5: Goleman Model of Performance

Self Personal Competence:		Other Social Competence
Recognition	Self-Awareness • Emotional Self-Awareness • Accurate Self-Awareness • Self-Confidence	Social Awareness • Empathy • Service Orientation • Organizational Awareness
Regulation	Self-Management • Self-Control • Trustworthiness • Conscientiousness • Adaptability • Achievement Drive • Initiative	Relationship Management (Social Skills) • Developing Others • Influence • Communication • Conflict Management • Leadership • Change Catalyst • Building Bonds • Teamwork and Collaboration

Goleman (2000) defined emotional intelligence as a performance subset linked to competency. Goleman's model also considers other seminal studies by Mc Clelland (Goleman, 2000), who explained that emotional intelligence is the indicator of competency for an employee to perform. The strength of the Goleman model is a mixed model of emotional intelligence, which is adopted in many emotional intelligence inventories, namely: Bar-on EQ-I Scale, Schutte's EI Scale, Boyatzis, and Goleman's Emotional Competence Inventory, and Cooper's EQ Map (Zeidner et al., 2004). The model selection was based on the rationale from a previous study (Mo, 2009).

2.5.7 Ability Model Versus Mixed Model of Emotional Intelligence

Table 2.6: Mixed and Ability Model Comparison

Item	Mixed Model	Ability Model
Concept of EI	EI is seen as a collection of competencies and shared expressions that enable individuals to act adaptively and adjust to changing environmental conditions. The structure encompasses several facets of emotion, personal knowledge, and human functioning that are or are not inextricably linked to feeling, counting; inspiration, defining traits of one's identity, personality, moral character, and social abilities	EI is seen as a well-defined and conceptually connected collection of cognitive abilities associated with the preparation of exciting data and the adaptive direction of feelings.
Factor Structure	small observational information. The typical figure found for person distributed scales, but small proves to bolster claims of numerous components (cf. Petrides & Furnham, 2000)	Contrary to the 4-branch demonstration. Calculate exploratory and expository information using three calculable models of perception, comprehension, and regulation (Mayer, Caruso, & Salovey, 2000; Roberts et al., 2001)
Reliability Scale	Acceptable (Bar-On, 1997; Dawda & Hart, 2000)	Poor to Moderate (Roberts et al., 2001); inconsistency across scoring techniques and low subtest consistency
Psychological Focus	Emotional	Cognitive
Theoretical Model	Personality/Psychological adjustment	Intelligence/Performance
Typical Facets	Self-awareness, self-motivation, self-regulation, empathy, social abilities, assertiveness, stress tolerance, impulse control, stress management, reality testing, and social problem solving, among others.	Emotion identification, emotional comprehension, emotion assimilation into cognition, and the use of emotion to improve thought are all necessary components of emotion control.
Example of Scale	The EQ-i by Bar-On, the EI scale by Schutte, the Emotional Competence Inventory by Boyatzis and Goleman, and Cooper's EQ Map.	MEIS, MSCEIT of Mayer, Caruso, and Salovey

Adapted from: Zeidner, Matthews, and Roberts (2004)

The critical element in this study is the development of the facets of emotional intelligence. The facets developed from previous seminal researchers were adopted in many industrial practices. In this study, their comparison is between the mixed model and the Ability Model. The mixed model is an emotional intelligence model that Goleman developed (2000) based on the mixture of competencies, encompasses other areas of emotional and

personal aspects, and covers broader context such as motivation, personal function, ecosystem, and personal knowledge. These areas differ from the ability model developed by Salovey and Mayer (1990). Both models serve their purposes and uniqueness in studying emotional intelligence. Salovey and Mayer's (1990) model aimed to identify the cognitive and emotional ability of an individual. These two comparisons show that both models serve a specific purpose in the workplace and social setting. In the context of Sarawak Civil Service, both models are significant for this study due to the parameter of the study covering the government interface that requires both models for the best outcome. Goleman's model covers the affective psychological element, while Salovey and Mayer cover cognitive.

2.5.8 Proposed Facets in The Mixed Model

Ability Model	Proposed Facets	Mixed Model
(Mayer four branch)	Calibration	(Goleman Competency Model)
Perceiving Emotion	Perceiving Emotion	Self-Awareness
Using Emotions	Social Skills	Relationship Management
Understanding Emotions	Utilizing Emotions	Social Awareness
Managing Emotions	Managing in Self-Emotions	Self-Management

Figure 2.3: Proposed Mixed Facets

This study proposes calibration between two models to ensure the gaps are filled. The model's calibration technique is adopted from a previous study conducted by Schutte et al. (2009). The purpose of mixing both models is to ensure this study covers both psychological adjustment and performance in one model. Another study done by Mo (2009) also adopted a similar approach line to ensure the model meets the aims of the research.

This study adopts the four-quadrant facets: Perceiving Emotion, Social Skills, Utilizing Emotion and Managing in Self Emotion. The justification for selecting the mentioned facets is to cover the psychological and intelligence domains from both models developed by the seminal researcher in emotional intelligence. The four-quadrant facets were developed by Schutte et al. (2009) and adopted in this study.

2.6 Understanding the Concept of Organizational Readiness for Change

In Lewin's (1951) study, he indicated the stages of an organization dealing with change management: Unfreezing, Change, and Refreeze. Change management is defined as the progression of constantly reviving an organization's direction, structure, and capabilities to fulfil the shifting needs of external and internal demand (Lewin, 1951).

In the context of an organization, employees need to understand the organisation's readiness to embrace changes and the role of emotional intelligence on organizational readiness for change. Goleman (1995) study explained that emotional intelligence constructs individual emotions in the change process. Thus, there was a relationship between emotional intelligence and the change process (Goleman, 1995). Emotional intelligence plays an essential role for the employee to understand organizational readiness for change as the subject involved in the change process. A recent study by Allaou and Benmoussa (2020) indicated that people's positive feelings about organizational change would make organizational change successful. Allaoui and Benmoussa (2020) also indicated that there was a positive impact on organizational change.

2.6.1 Model of Organizational Change

The organisational change model by Lewin (1951) illustrates how an organisation progresses from a known state to an unknown one. Because the change's future is unpredictable and may affect people's values, coping abilities, and competence, the organization's people resist change until they are persuaded that the present system is unsustainable. Lewin (1951) established the organization change model for managers and leaders to use structure to monitor, assess, and divisional structure may result in responding quickly to the internal or external environment and forecasting the pattern of change by personnel, goods, and technology, and market. Various theories have been offered for change processes; however, this research should always adopt Lewin's three-step model for change. Peters and Waterman (1982) were motivated by the Lewin model to broaden the organizational transformation model to include a cultural excellence model for change.

The responsive shift occurs when direct or indirect pressures compel the company to change, while proactive change occurs when the organisation determines that change is desired. Pettigrew's (1977) research demonstrated the emergence of a processual approach as a holistic perspective of the organisation and environment, emphasising the importance of power, culture, and politics in shaping change.

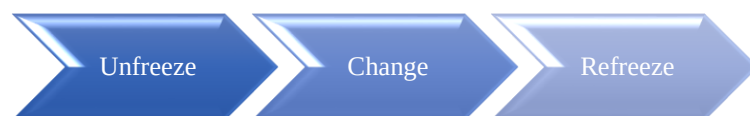


Figure 2.4: Model of Organizational Change. Adapted from: Lewin (1951)

The model is divided into leadership, management, and organisational cycles. According to Lewin (1951), this procedure is launched by a three-step change model that

illustrates the sequential stages of unfreezing, modifying, and refreezing, with leaders involving and instructing workers on change-related concerns.

As Hussain et al. (2018) defined, employee participation aims to improve members' input into choices that influence the organization's performance and employee well-being. This may be characterised by four components: power, information, knowledge, and talent, as well as incentives that encourage worker or employee participation. Employee participation is the most extended established technique for creating and executing organizational transformation, and involvement will result in additional change and overcome opposition during the implementation stage (Hussain et al., 2018).

This generates a wealth of facts and ideas that may help develop effective and appropriate breakthroughs for the scenario, increase the probability, foster group desire to change implementation, and motivate and lead employees further at the workplace. Managers must encourage employee engagement to accelerate organizational change when challenging the status quo.

Change initiatives require emotional and behavioural adoption of the change. In the organisational context, positive emotional intelligence competence is vital for employees to cope with the change. This is because the members of the organization that operate the transformation initiative are the “ People”. Norshidah's (2011) study has explored the connection between organizational readiness for change and emotional intelligence in Malaysia. The study revealed that the application of change management theory significantly contributed significantly to explaining individual emotional intelligence on adoption with the organization's change readiness.

Emotional intelligence is critical for adapting employee perceptions of emotion concerning organizational preparedness for change and behaviour responses concerning the organization's capacity to deal with change. Norshidah (2011), on the other hand, revealed that organisational transformation might have a detrimental effect on emotional intelligence if an organization's members have poor emotional intelligence throughout the transition process. Additionally, Allaoui and Benmoussa (2020) argued that individual aspects are more significant than other variables in the organizational change readiness context.

2.7 Underpinning Theory

This part presented related theories and models, with open systems as the primary model and together with robust justification on the application and decision to adopt open system theory. The open system theory will explain the links of the variables: emotional intelligence, organizational readiness for change, and digital competency as one centred system theory. Three sub-related models will be used to strengthen the justification of concept development and related variables and link with the underlying theory.

2.7.1 The Open System Theory as an Underlying Theory

System theory is widely used in various research fields around the globe. Systems theory originated in biology and was created in the 1950s in response to the need for systematic theoretical constructs to discuss the empirical world (Lai & Lin, 2017).

Another source of systems theory is mechanical engineering's cybernetic systems theory. Cybernetics is a word that relates to the control and communication of machines. As with general systems theory, cybernetic systems theory principles are beneficial in describing the behaviours of social systems that have been expanded from machine systems

(Lai & Lin, 2017). The three levels of observation in systems theory are the environment, the social organisation as a system, and the human players inside the organisation. This multi-level approach may be traced all the way back to the initial goal of fostering communication amongst disciplines through systems theory (Juliet & Bassey, 2017). This goal, it is suggested, may be done in various ways. One of them is to identify common occurrences that may be seen across several fields. For example, it is prevalent in all social systems where aggregations of people interact with one another and with their environment and establish interdependent connections.

The technological pervasiveness of companies reaffirmed systems theory as a viable method for studying and improving organizations, as organizations became more open systems susceptible to the effect of their surroundings in this digital era. According to Lai and Lin (2017), studies conducted before the 2000s examined the relationship between technology and organizations; it became much more apparent and ubiquitous throughout this century.

Numerous researchers have applied systems theory to their studies of complex networks and organisations, specifically how they interact with their enormous pool of stakeholders, manage massive amounts of data, information, and knowledge, and improve the organisation through digital feedback and control mechanisms (Hayajneh, 2007; Lai & Lin, 2017). Organizational procedures and communication have benefited from technological advancements. Internally, it enabled the creation of an intranet for personnel administration, collaboration monitoring, the alignment of huge, complex organisations around the standard and unified messaging, and the development of an organisational network.

This study uses open system theory as its leading theory to explain the link with all the variables: emotional intelligence, organizational readiness for change, and digital competency. The application of system theory is adopted due to the explicate dynamic relationship and interdependence between components of the system and the organisational environment relationship (Lai & Lin, 2017; Vaughn, 2018). System theory is aimed at three levels of observation: the environment, the social organization as a system, and human participation.

In Hayajneh's (2007) study, the open system theory interacts with the external environment with three necessary foundations in system theory: Input, Transformation or Process and Output. Input in the organisation's context is raw resources that comprise human resource aspect, capital, and technology that is important to operate in an organisational setting. The transformation domain interacts with internal and external environments and takes input as an incoming process that contributes to management activity, change initiative, and technological tools. The open system theory's output addresses the result of human competency and performance, financial results, and information.

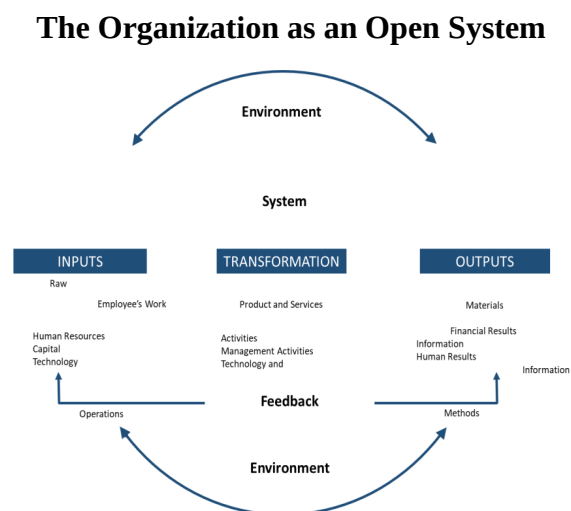


Figure 2.5: Open System Theory. Adapted from: Hayajneh (2007)

Open system theory is widely used in many fields of study due to the theory's ability to anchor or encompass the system process (Juliet & Bassey, 2017). In the human resource development field, an open system is viewed as the system that anchors the complete process of the internal and external environment that involves input, transformation, and output (Jacobs, 2014). Input element involves employee work such as employee motivation, attitude, emotions, competency, capital, and technological tools to perform work.

2.7.2 Link Between the Open System Theory and Emotional Intelligence

The open system theory existed and has been in the research world for many decades. The application of the open system theory is being used in many research fields. The justification of the linkage of open system theory to the sub-model and the variable in the study is crucial for this study. Thus, the linkage will strengthen the flow of research theory and model applied in the study.

In the context of this study, emotional intelligence is an input that interacts with the internal and external environment because of change management demands and forces from the industry. An operational definition of emotional intelligence in all live human systems and at all system levels is required for a systems-centred definition of emotional intelligence. According to Agazarian and Gantt (2004), the definition can be applied to systems as small as a person or a position and systems as big as a work team, a department, or an organisation.

Using the notion of living human systems to construct an operational definition of emotional intelligence shifts emotional intelligence away from being a personal trait and instead defines it in terms of living human systems (Agazarian & Gantt, 2004). As a result, every live human system's emotional intelligence may be considered and assessed at any system level. Vaughn (2018) stated that the live human systems (work teams, companies,

and communities) that generate the circumstances for emotional intelligence at all system levels might then be understood and developed using a systems-centred model of emotional intelligence. Vaughn (2018) also applied open system theory as an underlying theory to explain the impact of emotional intelligence on executive coach performance in an organization setting. The employee is an essential element of the system, and knowing how they affect it is important for both successful development and the general health of the organization.

Jacobs (2014) study explained increased access to emotional intelligence and human resource development to address all living human systems' challenges. It is undeniable that in the 21st century, the industry has changed rapidly, and everything needs a new support system. The community and the people who live in it may thrive or survive, evolve, and change in systems-centred terminology. Thus, exploring integrated elements or sub-models within the theory will help future research explore current issues and concerns that might contribute to the study of emotional intelligence and human resource development.

The emotional intelligence sub theory is essential in open system theory, and this is due to explaining the process of employee input from a human resource perspective. Jacobs (2014) stated that human resource factors as an input to the system theory are essential to understanding the underlying process of employee perception, competency, psychological, motivation, and other factors related to the input resources. In this study context, input resources are emotional intelligence.

According to Laszlo and Krippner (1998), the input domain in the environment, defined as the set of all items whose qualities affect the system and those whose attributes are modified by the system's activity, will have to interact with open system theory. It has

been proven that Emotional intelligence, as an input of the open system theory, may influence the system's behaviour in open system theory (Laszlo & Krippner, 1998; Jacobs, 2014; Vaughn, (2018). The justification here is that emotional intelligence acts as vital input that influences the element in the system theory, which affects transformation and output in the open system theory. Previous studies by Vaughn (2018), Jacobs (2014) and Agazarian and Gantt (2004) have proven that the application of open system theory in emotional intelligence study provides a significant effect on the transformation and output element in the context of an organization

The study begins with the issue, not a predetermined model, when undertaking an open systems analysis of a problem or scenario with the environment setting. The emotional intelligence domain may go inside the sub-systems and outside the environment after the problem's expression has been discovered and characterised.

2.7.3 Link Between the Open System Theory and Organizational Readiness for Change

The transformation process in this study involves management activities and technological transformation. The organization is experiencing changes as part of management activities that address change management process initiatives. Some organizations are experiencing transforming the technological tools to innovate new ways of doing work. The interaction of this transformation process is due to the external environment that forces the internal environment to adapt and change to the industrial needs.

Organizational management systems are composed of several internal subsystems that must constantly be aligned. According to McShane and Glinow (2003), when businesses expand, they build more complex subsystems that must work together to translate inputs into

outputs. These interdependencies may quickly grow so complicated that a trivial incident in one subsystem might have far-reaching unintended implications across the organisation. Thus, open system theory can have the ability to explain the complex transformation and change management that is occurring (Chikere & Nwoka, 2014). A study by Weihrich et al. (2008) also agreed that no structured company exists in a vacuum. It is well recognised that it relies on its external environment, which is a component of a broader system, such as the industry to which it belongs, the economic system, and society. The organisation takes inputs, alters them, and releases the outputs into the environment.

Sundarasaradula and Hasan (2014) stated that open system theory was concerned with sustaining the internal environment and its interactions with the external ecosystem throughout the organizational change. Change management is described as the shift in information caused by needed service and maintenance operations, which is always positive owing to the nature of indirect costs, and as the change in entropy created by the input-transformation-output process, which may be positive or negative. Changes in performance and service delivery are possible within an organisation. Additionally, Sundarasaradula and Hasan (2014) indicated that it encompasses all actions required to sustain and support the organisation and all activities involving environmental contact and creating goods and services.

The open system theory can explain organisational change's concept and model. The concept of organisations exchanging resources with their environment is incompatible with the closed systems model's assumption of an organization's lack of contact and reliance on its environment. Maes and Hootegeem (2020) justified that system theory is significant for organizational change in terms of systems theory. An organization can contain both

subsystems (production, accounting, administrative systems, HR system, etc.) and aspect systems (hierarchic relations, data flows, etc.). The model assumes that the management of change is a subsystem with a specific function within the organization, the same way that, for instance, the HR system has its function. The ecosystem's increasing structural complexity could justify this insight due to technical, social, economic, and political developments (Norshidah, 2011). The implications of these developments on organizations necessitated a rethinking of the validity of the prior model and its assumptions by organizational theorists. This resulted in the emergence of a new generation of ideas based on the open systems paradigm, which became prominent throughout the 1960s and 1970s (Sundarasaradula & Hasan, 2014).

The open system theory helps this study comprehend the interaction of internal and external environments in organizational readiness for change. This has been proven in the previous studies on applying the open system in organisational change (McShane & Glinow, 2003; Weihrich et al., 2008; Norshidah, 2011; Sundarasaradula & Hasan, 2014; Chikere & Nwoka, 2014; Maes & Hootegeem, 2020). The organization is a system that contains input from an employee and any other resource, and transformation covers the activities that interact with the internal and external environment that will define the service or good offered to the end-users. At the same time, the output is the outcome of process interaction with input and transformation.

The transformation element in open system theory addresses activities, technology, and management activities that influence the organisation's service or product. Taking consideration applying open system theory to explain organization readiness for change will address readiness for the organization to change the management activities based on

organization aspirations that might influence the service delivery. This robust justification is based on supporting literature from previous studies that adopted the open system theory in organisational change.

2.7.4 Link Between the Open System Theory and Digital Competency

At this stage, the open system theory is used to explain the connection on the output of the open system theory. McClelland introduced the application competency model in system theory in 1973 (Bradley, 2014). However, many critiques exist due to the closed system's inability to interact with the external environment and operate in a silo. In a later year, Bradley (2014) discovered the application of the open system theory in developing the competency model. A study by Bradley (2014) explored the linkage of system theory in developing a competency model framework. According to Bradley (2014), the competency model developed based on system theory helps researchers explore in-depth individual capability in an organisational context. Input element from a human resource perspective can be an individual capacity to interact with transformation element and resulting in human resource output; in Bradley's (2014) study is the competency. Jacobs's (2014) study on the application of open system theory in human resource development revealed that the open system process on human capital development starts with an input element that measures “AS IS” or current ability and interacts with organization activities that will result in competency or performance individual. An output of this study is Digital competency as a result of the interaction of the input and process with the internal and external environment. In this context, the internal and external environment can be volatile, uncertain, complex, and ambiguous (VUCA). A study by Bartscht (2015) explained the application of the open system in the VUCA environment as the best way to get clarity from the open system on

individual behavioural alignment with a dynamic environment. This study adopted Open System Theory as its primary model to explain the flow of independent variables (emotional intelligence), a mediator (Organizational Readiness for Change), and a Dependent Variable (Digital Competency).

2.7.5 Linkage Between Open System Theory and Study Variables as a Flow of Operational

Previous scholars address the application of open system theory in explaining the complex behavioural, organisational change and performance issues. Additionally, the growing recognition of the complex and frequently changing nature of organisational contexts promoted the development of systems theory. In the 1960s, systems theory laid the groundwork for significant theoretical development, including the popular open systems approach (Lai & Lin, 2017; Vaughn, 2018). Due to the abstract nature of systems theory, the contingency view was later proposed, emphasising the specific relationships within and among the organization's subsystems, as well as its relationships with the environment, in order to understand better how organisations operate and adapt to changing environmental conditions (Lai & Lin, 2017). Additionally, the growing recognition of the complex and frequently changing nature of organisational contexts promoted the development of systems theory. In the 1960s, systems theory laid the groundwork for significant theoretical development, including the popular open systems approach (Vaughn, 2018). Due to the abstract nature of systems theory, the contingency view was later proposed, emphasising the specific relationships within and among the organization's subsystems and its relationships with the environment to understand better how organisations operate and adapt to changing environmental conditions.

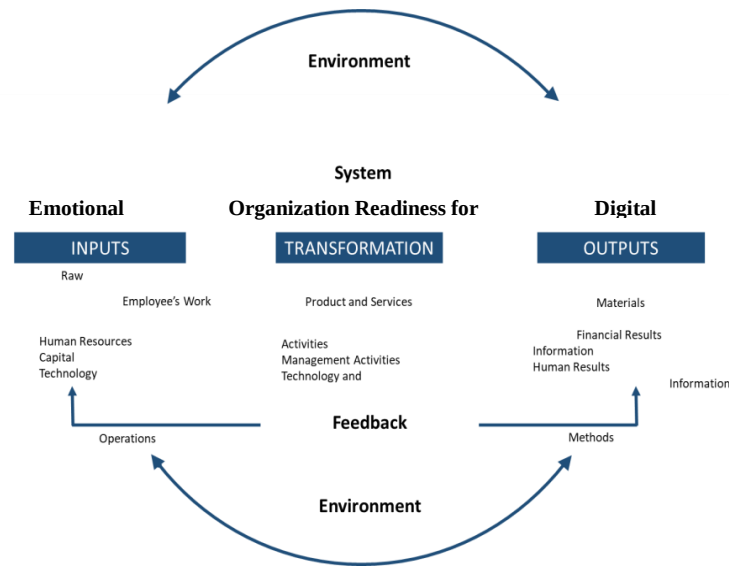


Figure 2.6: Linkage between Open System Theory and Study Variables

2.7.6 Emotional Intelligence as an Inputs Element in Open System Theory

Emotional intelligence is an input element in open system theory related to human resource capacity and behaviour. In this study, emotional intelligence is the process variable operationalising the input element that interacts with the feedback, external environment, and organization activity. Figure 2.6 shows the flow of the process of system theory for this variable acts as human resource capacity in emotional intelligence that will react to the organization's readiness for change which is the component of the transformation element. The emotional intelligence inputs element will also react and define employee emotional intelligence based on feedback from the organization as a system.

2.7.7 Organizational Readiness for Change as Transformation Element in Open System Theory

The transformation element in open system theory concerns management activities, technology and other related transformation and change activities related to the internal and external environment. Transformation element activities concern the change initiative, such as changing the organisation's structure, direction, technological tools, and business nature (McShane & Glinow, 2003; Weihrich et al., 2008; Norshidah, 2011; Sundarasaradula & Hasan, 2014; Chikere & Nwoka, 2014). Figure 2.2 showed that organizational readiness for change in this study act as a Transformation element that encompasses the management activity that assesses the readiness for change within the organization and how it reacts to the external environment. This has been proven in Sundarasaradula and Hasan (2014) and Chikere and Nwoka (2014) on change management interaction with the open system theory. The transformation element, also known as process, will be defined by the input element (emotional intelligence) based on human resource ability and behaviour.

2.7.8 Digital Competency as an Output Element in Open System Theory

Interaction from Inputs (Emotional Intelligence) and transformation elements (Organizational Readiness for Change) will result in output elements in the human result. In this context, the human result is digital competency. Interaction between the input and transformation elements and external and internal environments will define the employee's digital competency level. This is potentially occurring due to the transformation element in this study addressing the organisation's change readiness in overcoming the digital age and how employees perceived change initiative based on emotional intelligence self-profiling.

The entire, complete cycle of open system theory can explain the complex integrated issues with integrated sub-model or theory in the study.

Single models or theories related to the study variable cannot explain the one-way process flow that explained the nature of the study based on the conceptual framework and previous studies conducted in emotional intelligence, organization readiness for change, and digital competency. Thus, this study decided to apply open system theory as the underlying theory provided strong justification for the links between the open system and the variable involved.

2.8 Development of Hypothesis

The structure of this section is based on the chronological order of the research hypotheses in chapter 1, which is also linked to the research objectives. This section starts with the past related study of emotional intelligence for hypothesis development, followed by organizational readiness for change as a mediator and digital competency. The hypothesis of the study was developed based on the findings from international, Asian and local context.

2.8.1 The Effect of Perception of Emotion on Digital Competency

Emotional intelligence is defined as the ability to monitor one's own and others' feelings and emotions (Boyatzis, Rochford, & Cavanagh, 2017). According to Boyatzis (2009), competency is the behavioural manifestation of emotional intelligence in how individuals use their emotional and social components to build their competency. Emotional intelligence is significant for digital competency profiling because education performance can be different from mental performance. For instance: - Top student with a CGPA of 3.9 and with a lack of soft skills versus a student with a 3.5 CGPA with the ability to evaluate the critical situation. This analogy explains how emotional intelligence is helpful to define

individual intelligence not purely based on his or her educational performance but a “mental performance” to comprehend the situation and make a rational decision. This concept is useful, particularly when hiring a pool of candidates with good grade but lack of emotional and social intelligence. The development of the hypothesis is based on the findings and research guides from the seminal study in emotional intelligence.

Perception of emotion is defined as the ability to decode information, which entails identifying information conveyed by facial expressions, tone of voice, gestures, body posture, colour, and other cues (Salovey & Mayer, 1990). Perception of emotion is one of the significant elements in emotional intelligence guided by the model developed by Salovey and Mayer (1990). Perception of emotion is significant to comprehending other emotions and developing social interaction. The development of this element or quadrant was guided by the seminal studies and model developed by Salovey and Mayer (1990), Goleman (1995), and Schutte et al. (2009). To study this quadrant in greater detail, this study explores the insight into the development of the used variable and the significance of employee competency and performance. Kong, Bottom Konczak (2016) did a study that revealed a connection between emotion perception, competency and value-claiming performance in the contingent pay condition. Perception of emotion is essential to describe individual emotion toward and competency. To support this statement, Kong, Bottom, and Konczak (2016) also provide another finding from previous studies on emotion perception toward employee competency and performance. For example, Supramaniam and Singaravelloo (2021) discovered a positive correlation between government service workers' emotion perception and peer- and supervisor-rated job performance, while Byron et al. (2007) discovered a positive correlation between salespeople's emotion perception and competency as measured by the average number of cars sold per month and their average annual salary increases. Both

studies point out this quadrant's necessity to study the perception of emotion in-depth. Based on the empirical findings, there are clear findings on the development of emotion perception in the emotional intelligence quadrant.

Perception of emotion is not only limited to performance and competency; it can also be used to investigate ability in motivation to lead. Krishnakumar and Hopkins (2014) stated that there was a positive relationship between emotional perception and motivation of the leader. A good leader must use emotion to influence others by creating positive expression and developing value as a potential leader that others could see.

The primary concerns that emerge when considering emotional intelligence are whether there is a difference in men's and women's emotional intelligence, if women are more emotionally intelligent than men and whether it is true that males are more rational than women are emotional (Salovey & Mayer, 1990). Historically, it has been considered that women are more sensitive to both good and negative emotions than males (Gayathri, 2020). Women are seen to be more emotional than males due to societal or biological circumstances. According to the scientific explanation, a woman's biochemistry is better suited to cope with her own and others' emotions because critical parts of the brain that determine a person's emotionality are greater in women than in males (Gayathri, 2020). According to Gavin et al. (2020), women outperformed males across all dimensions of emotional intelligence. Additionally, women lacked strategic emotional intelligence but excelled in experiential emotional intelligence to develop their competency, particularly when it came to perceiving one's own and others' emotions. To substantiate the development of the hypothesis, Al-Qadri and Zhao's (2021) investigation of the Asian environment revealed statistically significant disparities in respondents' emotional intelligence levels by

gender. Thus, this study is suggested that the hypothesis development for studying the difference based on gender in emotional intelligence is vital at this juncture and links it with the statement of the problem of the study. Salovey and Mayer (1990) defined emotional intelligence as the mental ability to understand individual emotions to suit themselves with situational to make a conclusion or decision. The development of this hypothesis is based on an outbreak study done by Salovey and Mayer (1990) in the field of psychology. Salovey and Mayer (1990) have proved that perception of emotion is linked to social and competency. To support Salovey and Mayer's (1990) study, another study done by Kong, Bottom, and Konczak (2016) also indicated that there was a positive effect on the perception of emotion and competency.

A study by Tharbe et al. (2021) in the Malaysian context stated that emotional intelligence abilities might operate as a shield against the negative impacts of emotional stressors, allowing the person to deliver effective care while maintaining their psychological well-being. A consistent study supporting the development of the hypothesis suggested that emotional intelligence has a significant effect on the performance and competency of individuals. Consistent findings in the Malaysian context by Hatta and Abdullah (2020) revealed that most employees reported moderate levels of job stress, which were supported by high levels of job performance, competency development and emotional intelligence. It was shown that emotional intelligence aspects were a significant mediator in the association between work stress, competency development and job performance among respondents. Hatta and Abdullah (2020) research emphasises the critical role of emotional intelligence components in determining educators' perceptions of job pressure and performance. The development of the hypothesis is based on findings from a seminal study. Emotional intelligence is also essential to improve employee performance and corporate image in the

long run. The correlation between employee emotional and social intelligence toward organisational performance can be found if employees manage to master individual emotional and social intelligence (Kearney et al., 2017).

Based on the above discussion, the following hypothesis was proposed:

H_{a1}: There is a significant effect of perception of emotion on digital competency

2.8.2 The Effect of Managing Emotion in Self on Digital Competency

The model developed by Schutte et al. (2009) is imperative to be investigated further based on the seminal findings by Salovey and Mayer (1990), and Schutte et al. (2009) explained the significance of managing emotion in self and performance link, which is the competency of an individual. Managing emotion is the ability of an individual to manage and adapt to internal and external pressure, such as stress (Schutte et al., 2009). The current study adopted an instrument developed by Schutte et al. (2009). It is found that all the quadrants significantly affect individual performance and competency. Another study by Olson et al. (2019) also explained a difference in emotion management based on social interaction and psychodynamics. Olson et al. (2019) showed a statistically substantial discrepancy in the performance between secondary teacher outcomes towards emotion management in digital environment. This domain was developed based on the models and assessment instruments that Salovey and Mayer (1990) and Goleman (1995) developed. Olson et al. (2019) describe emotion management as a concept concerned with how a person uses their ability to modify their emotions and other emotions in a social setting. Olson et al. (2019) also explained a difference in emotion management based on social interaction and psychodynamics. Olson et al. (2019) showed a statistically significant difference between secondary teacher outcomes based on gender towards emotion management. The sample and

population used in Olson et al. (2019) is the population taken from Australian teachers. A study by Al-Qadri and Zhao (2021) consistently discovered statistically significant variations in individuals' emotional intelligence based on gender. By contrast, there were no statistically significant variations in respondents' emotional intelligence levels by grade.

Nevertheless, there is no noticeable gender gap in men's or women's emotional intelligence in specific contexts. In a study carried out in the United Kingdom, Arteche, Chamorro-Premuzic, Furnham, and Crump (2008) discovered no significant association between overall emotional intelligence and gender in the sample of workers that they used for their research. A study that was carried out in Myanmar found that the emotional intelligence of male and female instructors did not differ significantly from one another in any significant way (Myint & Aung, 2016). The percentage of males and females who hold this belief is statistically equal when it is occasionally essential to be impolite rather than keep a straight face, regardless of gender, is eager and determined to become fluent in the skill of being annoying in another language (Ahmadi & Heydari, 2011).

Male and females are different in dealing with emotion management, particularly in a social setting. Managing emotion is limited to taking off other feelings and controlling the critical situation in a social setting, but it is also significant to manage personal stress and reactivity toward specific issues, particularly issues regarding work or relationships.

According to Hede and Hede (2016), the dynamic of mindfulness in emotion management results in stress reduction and effective management of individual reactivity toward the perceived issue and new competency development in digital environment. Positive emotion management is essential to ensure the person can make a rational decision and develop positive intellectual. Positive emotion management is vital in aligning with

digital competency because the most significant challenge here is dealing with technical issues or troubleshooting that may influence competency and personal emotion.

Giorgi et al. (2020) explain that burnout and job discontent may likely occur due to the emotional labour involved. Emotional intelligence is crucial to managing positive emotions; particularly noteworthy is that burnout and job satisfaction are directly related to organisational outcomes, such as the desire to leave, absenteeism, work performance, and service quality. Sadovyy et al. (2021) study also mentioned that adverse organisational outcomes might have a detrimental effect on client services' quality, consistency, and stability and result in significant difficulties inside businesses due to poor employee emotional intelligence.

Emotional intelligence is a method to bring out the inner self of individual perception and personality management to develop positive emotional and intellectual growth. This element or construct aims to strengthen the finding in emotional intelligence toward digital competency. Since this construct is derived from the actual model developed by Schutte et al. (2009), it is imperative to be investigated further based on the seminal findings by the previous scholar. A Malaysian study by Hatta and Abdullah (2020) discovered that most workers experienced moderate workplace stress, accompanied by solid job performance and emotional intelligence. It was shown that emotional intelligence factors significantly influenced the relationship between work stress and job performance and competence among respondents. Hence, this study draws the hypothesis based on the pattern and proposal from the previous study.

Based on the above discussion, the following hypothesis was proposed:

H_{a2}: There is a significant effect of managing emotion in self on digital competency

2.8.3 The Effect of Social Skills on Digital Competency

Emotional intelligence is skills for living. One of the facets that deals with social setting is social skills. Social skills development is based on the environment exposed to the particular person. Karimzadeh, Goodarzi, and Rezaei (2012) argued that emotional intelligence is not an aptitude, achievement, or personality but a corresponding cross-sectional section of emotional, social competencies, and skills. Social skill development is a survival tool for living in society, particularly at work (Supramaniam & Singaravelloo, 2021). It is an undeniable social skills element in emotional intelligence telling the individual level of relationship, feeling, and impression. It is imperative to boost performance and develop competency, mainly when working with a big group of people to achieve a particular objective. An individual with high social skills most likely establishes good relationships and perceptions from others. In other words, acknowledgement from the social setting. A study in the Malaysia context by Supramaniam and Singaravelloo (2021) on Malaysia's civil service population revealed that social awareness as social skills in the context of emotional intelligence has a substantial beneficial influence on digital competency development, performance and demonstrates that the civil servant can sympathise with the public's needs. Communication with the public enables them to address the people's concerns, needs, and obstacles directly. Social awareness in the context of emotional intelligence strongly influences competency, performance and demonstrates that the civil servant can sympathise with the public's needs.

Boyatzis, Rochford, and Cavanagh (2017), mentioned that social skills are part of competency by developing a person's emotional intelligence. The development of social skills requires training and cognitive and social interference. A study by Cheung, Siu, and Brown (2017) stated that social skills proficiency contributes to an individual's success and

improved performance in studying or doing work. Cheung, Siu, and Brown (2017) show a relationship between social skills and performance in general. Cheung, Siu, and Brown (2017) stated that social skills proficiency contributes to an individual's success, digital competency and improved performance in studying or doing work. Cheung, Siu, and Brown (2017) aimed to measure the social skills of children and adolescents in a Chinese population and employed a skills improvement system rating scale (SSIS-RS-C) as a research instrument in digital environment. Based on Cheung, Siu, and Brown (2017), it is shown that there was a relationship between social skills, competency, and performance in general. Thus, this quadrant or element is significantly supported by previous findings to strengthen the philosophical value of this study. Riggio and Reichard (2008) explained a correlation between people skills, emotional intelligence, and social skills. "People skills" refers to individual skills and current competencies.

Riggio and Reichard (2008) describe based on the study that focuses on three main components of investigating the essential and effective leadership skills. Although Riggio and Reichard's (2008) study aimed at the future leader, it provides the empirical finding necessary to explain the correlation between competency and emotional intelligence. Supramaniam and Singaravelloo (2021) also mentioned that social awareness as social skills in the context of emotional intelligence strongly influences performance and demonstrates that individuals can sympathise with the public's needs.

Based on the above discussion, the following hypothesis was proposed:

H_{a3}: There is a significant effect of social skills on digital competency

2.8.4 The Effect of Utilizing Emotion on Digital Competency

An employee can apply their emotions to provide strategic ideas for their future, resulting in improved decision-making, critical thinking, and being more resilient in a challenging environment. Trivellas, Gerogiannis, and Svarna (2013) explained that firm members with extreme emotional intelligence experience practically continuous good mindsets, actuating more significant levels of fulfilment contrasted with the individuals who think about such sentiments as misery and frustration, neglecting to encounter a more elevated level of satisfaction. Along these lines, emotional intelligence workers are likelier to perceive, oversee, and utilize their feelings to rout difficulties and foster their abilities and capabilities.

In view of Salovey and Mayer (1990) stated that utilizing emotion is an essential element in social interaction and making a decision. Utilizing emotion is one of the ways to influence and as a skill to adjust acceptance in the social setting or even in the workplace. Schutte et al. (2009) study showed a significant contribution to utilising emotion as an element for individual survival and social adjustment. Thus, it is significant to adopt the original model and recommendation by Schutte et al. (2009) and Boyatzis, Rochford, and Cavanagh (2017) to include the element of utilizing emotion as one of the quadrants in this study.

Trivellas, Gerogiannis and Svarna (2013) did a study stating that emotionally intelligent employees are likely more capable of recognising, managing, and using their emotions to overcome obstacles and develop their skills and qualifications. Boyatzis, Rochford, and Cavanagh's (2017) study mentioned that emotional stability, self-motivation, managing relationship, self-awareness, and integrity emerged as competency predictors.

Boyatzis, Rochford, and Cavanagh (2017) also explained that competencies could be developed through emotional intelligence training that suits industrial needs, mainly digital competency. This finding showed that utilizing emotion is vital in developing skills. Not only that, Salovey and Mayer (1990) and Schutte et al. (2009) also agreed that utilizing emotion is one of the ways to improve social adjustment and influential skills. To strengthen the development of the hypothesis, a study by Al-Qadri and Zhao (2021) stated that people with high interpersonal emotions tend to utilize their emotional intelligence in social interactions, pay attention to and understand others' feelings, and process them well. Al-Qadri and Zhao's (2021) study hypothesis developed on the effects of intrapersonal (perception of emotion) and interpersonal (utilizing emotion) on achievement and performance. These consistent findings help the current study develop the hypothesis based on the actual model from the seminal study conducted in psychology and human resource. Thus, emotional intelligence is significant in evaluating employee competency. However, it is not easy to gain and maintain. Emotional intelligence can be trained to achieve social and emotional stability to improve individual performance and competency (Gruicic & Benton, 2015).

Based on the above discussion, the following hypothesis was proposed:

H₄: There is a significant effect of utilizing emotion on digital competency

2.8.5 Mediating Effect of Organizational Readiness for Change on Emotional Intelligence and Digital Competency

Industrial movement and market shift create opportunities and threats to the organization, impacting performance. Due to this impact, demand to change the organisation's operations is also affected in many ways, such as structure, technology, people, talent, and competency.

Organizational readiness for change is a significant mediation variable for this study. The development of this hypothesis is based on previous studies' recommendations. A study by Norshidah (2011) indicated that emotional intelligence contributes to organizational readiness for change. Allaoui and Benmoussa (2020) also supported that individual factors are more important than other factors to increase performance and manage emotions. Norshidah's (2011) study also discusses the impact of emotional intelligence on individual competency. Thus, the development of this hypothesis aligned with the study's objective.

Norshidah (2011) studied the influence of emotional intelligence on organizational readiness for changes in higher learning institutions in Malaysia and revealed that emotional intelligence significantly contributes to organizational readiness for change. In the context of Norshidah's (2011) study, organizational readiness for change in internal and external environments cover technology, structure, strategies, directions, and leadership. A similar study in Greece by Vakola, Tsaousis, and Nikolaou (2004) revealed the contribution of emotional intelligence to the attitude to organizational changes. Emotional intelligence is the driver of organizational changes that lead to employee perception based on their experience and behaviour towards change initiatives implemented or proposed (Hallgrimsson, 2008).

On the other hand, organizational change will negatively impact emotional intelligence when the member of an organization has low emotional intelligence during the change process. This happens due to confusion, low motivation, and low performance (Norshidah, 2011). Hallgrimsson did a study (2008) that revealed that there was a significant effect on employee attitudes toward organizational change and change readiness in the context of Norwegian. Hallgrimsson (2008) argues that attitude is tied with emotional states linked to emotional intelligence that help the employee adjust attitude toward organizational change, organization commitment, and readiness. Consistent findings by Rahiman et al. (2020) in the Bahrain context stated that emotional intelligence directly affects organizational commitment to embark on change. Lack of readiness for change management occurs due to information cascading and knowledge in managing change, particularly addressing employee competency. Some employees who are experiencing organizational change need to upskill or update knowledge, skills, and outdated abilities and are not relevant to the current demand. This statement is supported by Norshidah's (2011) study, which indicated the adverse effects of the organizational change process.

Allaoui and Benmoussa's (2020) research in the Moroccan environment found that, although there was a substantial positive influence on workers' attitudes toward change, individual characteristics were more relevant than other aspects. Allaoui and Benmoussa (2020) highlighted emotional intelligence in managing perception and noted that favourable attitudes toward organisational transformation would contribute to the organisation's success.

Mukhtar and Fook (2020) study on the impact of perceived leadership styles and emotional intelligence on an organization's attitude toward change discovered that perceived

leadership styles and emotional intelligence had a favourable influence on an organization's attitude toward change. Mukhtar and Fook (2020) added that identifying employee attitudes is the first step in understanding human behaviour because if an attitude can be controlled and modified, behaviour can be readily impacted. Developing workers' emotional intelligence competencies, such as interpersonal and intrapersonal skills, flexibility, and stress management strategies, is also critical to boosting employees' capacity to deal with change. Bikse et al. (2021) argued that transformation is part of change readiness and change management strategy. Additionally, businesses will confront the additional problem of managing extensive data in the near future. If they cannot manage change, their competitive position will deteriorate drastically if it catalyzes a genuine industrial revolution based on converging technologies and the impact of pandemics. Supported by Supramaniam and Singaravelloo (2021), employees' emotional capacities have been shown to significantly affect an organization's ability to change and hence positively influence performance.

The construction of organizational readiness for change refers to the previous studies conducted in the local and international contexts concerning emotional intelligence and competency. This robust evidence from previous studies on emotional intelligence is essential to organizational readiness for change. The past studies agreed that emotional intelligence is significantly vital to organizational readiness for change.

Based on the above discussion, the following hypothesis was proposed:

H_{a5}: There is a mediating effect of organizational readiness for change on emotional intelligence and digital competency

Table 2.7: Summary of Past Studies

Emotional Intelligence					
No	Main Researcher	Region	Years	Major Findings	Research Design
1.	Salovey and Mayer	European	1990	Ability Model Development	Quantitative
2.	Goleman	European	1995	Mixed Model Development	Quantitative
3.	Schutte et al.	European	2009	Schutte Self Report Inventory on four domains: - Perception of Emotion, Managing Emotion in Self, Social Skills, and Utilizing Emotion	Quantitative
4.	Byron et al.	European	2007	Emotion perception was positively related to their job success	Quantitative
5.	Krishnakumar and Hopkins	European	2014	the positive relationship between emotional perception and motivation for a leader	Quantitative
6.	Kong, Bottom, and Konczak	European	2016	the connection between emotion perception and value-claiming performance in the contingent pay condition	Quantitative
7.	Salovey and Mayer	European	1990	Ability Model Development	Quantitative
8.	Goleman	European	1995	Mixed Model Development	Quantitative
9.	Olson et al.	Australia	2019	emotion management is a concept concerned with how a person uses his or her ability to modify their emotion and other emotion in a social setting	Quantitative
10.	Hede and Hede	European	2016	Dynamic of mindfulness in emotion management resulting in stress reduction and also effective management of individual reactivity toward the perceived issue	Quantitative
11.	Karimzadeh, Goodarzi, and Rezaei	European	2012	Emotional intelligence is not an aptitude, achievement, or personality. It is an interrelated cross-sectional section of emotional, social competencies, and skills	Quantitative
12.	Boyatzis, Rochford, and Cavanagh	European	2017	Social skill is part of competency by developing a person's emotional intelligence. The development of social skills requires training, cognitive and social interference	Quantitative
13.	Cheung, Siu, and Brown,	Asian	2017	Social skills proficiency contributes toward the success and improved performance of an individual in study or doing work	Quantitative
14.	Trivellas, Gerogiannis, and Svarna	European	2013	High emotional intelligence experiences almost uninterrupted positive moods, inducing higher levels of satisfaction compared to those who consider such feelings as distress and disappointment, failing to experience a higher level of fulfilment	Quantitative
15.	Supramaniam and Singaravelloo	Malaysia	2021	revealed there was a positive connection between public service employees' emotional perception and their peer- and supervisor-rated job performance	Quantitative
16.	Tharbe et al	Malaysia	2021	Emotional intelligence abilities may operate as a shield against the negative impacts of emotional stressors, allowing the person to deliver effective care while maintaining their psychological well-being	Qualitative
17.	Al-Qadri and Zhao (2021)	China	2021	statistically significant variations in individuals' emotional intelligence based on their gender	Quantitative
18.	Hatta and Abdullah	Malaysia	2020	Emotional intelligence aspects were a significant mediator in the association between work stress and job performance among respondents	Quantitative
19.	Debes	European	2021	positive correlation between perceived emotional intelligence and self-efficacy in the workplace context	Quantitative
20.	Giorgi et al.	European	2020	Emotional Intelligence directly correlates with organizational outcomes	Quantitative
21.	Sadovyy et al., 2021	European	2021	Emotional Intelligence harms quality and service performance	Quantitative
22.	Gayathri	India	2020	There was a difference between female and male emotional intelligence	Quantitative
23.	Gavin et al	European	2019	Women outperformed males across all dimensions of emotional intelligence	Quantitative

Table 2.7: Continued

Organizational Readiness for Change					
No	Past study	Region	Years	Major Findings	Research Design
1.	Allaoui and Benmoussa	Morocco	2020	Significant impact on employees' attitudes toward change	Quantitative
2.	Norshidah	Malaysia	2011	Emotional intelligence contributed significance to organizational readiness for change	Quantitative
3.	Hallgrimsson	Norwegian	2008	Significant effect on employee attitudes on organizational change and change readiness	Quantitative
4.	Vakola, Tsaousis, and Nikolaou	European	2004	The significant contribution of emotional intelligence to the attitude to organizational changes	Quantitative
5.	Rahiman et al.	Bahrain	2020	Emotional intelligence has a direct effect on organizational commitment to embark on change	Quantitative
6.	Mukhtar and Fook	Malaysia	2020	leadership styles and emotional intelligence have a positive effect on an organization's attitude toward change	Quantitative
7.	Bikse et al.	European	2021	Change readiness has a positive influence on change management strategy	Quantitative
Digital Competency					
No	Past study	Region	Years	Major Findings	Research Design
1.	Brown	UK	2014	Conceptual Paper on Digital Literacy	Qualitative
2.	In Porat, Blau, and Barak	Middle East	2018	The findings highlight the importance of designing training programs aimed at developing students' digital literacies, with a particular emphasis on social-emotional competencies	Quantitative
3.	Calvani, Fini, Ranieri, and Picci	Italy	2012	Three concepts when assessing digital competency: Visual literacy, Troubleshooting, and Understanding technological concepts. It was also found that the younger generation's digital competency is poor	Quantitative
4.	Pereira and Romero	Spain	2017	Digital competency concept in Industrial 4.0 age	Qualitative
5.	Enke et al. (2018)	Germany	2018	The industrial revolution affected the current business model and directly affected the current competency model, particularly addressing manufacturing firms and IT firm	Qualitative
6.	Abdulteeef and Khateeb	UAE	2017	Digital competence is associated with three knowledge areas that must be integrated: technology proficiency, pedagogical compatibility, and social awareness	Quantitative
7.	Khan and Bhatti	Pakistan	2017	Digital competencies are essential for the librarian to protect digital content, manage the digital library, and resources	Quantitative
8.	Cabero et al.	Spanish	2021	digital competence of higher education instructors has discovered substantial disparities in scores across educators in many areas of expertise for each gender	Quantitative

Table 2.7: Continued

9.	Guillen-Gamez et al.	Spanish	2021	there were no statistically significant variations in the degree of digital competence of teaching staff between the genders	Quantitative
10.	Khan et al.	Malaysia	2021	the majority of Malaysians have little or no digital skills. Because of these problems, most workers and graduates cannot satisfy industry requirements.	Quantitative
11.	Zulkarnain et al.	Malaysia	2021	respondents had the lowest levels of success when it came to developing digital content	Quantitative
12.	Kassim et al.	Malaysia	2021	demonstrated a variation in the capacity to manage computers, networks, and hardware, as well as a grasp of how to handle formal computer and network features	Quantitative

2.9 Chapter Summary

This chapter briefly presents the issues related to the problem investigated, relevant models, theories about the study, and similar findings of previous research. This chapter will link to the next chapter, which delves into how this study is done.

CHAPTER 3

RESEARCH METHODOLOGY

3.1 Introduction

The research methodology chapter delves into applying the research concept, strategies, and model to guide the study. This chapter is significant to this study due to demonstrating the validity and robustness of the research methods, procedures, and instrument development design by adopting the research onion model. This chapter discusses the methodologies used in this research. The sections discussed include research design, population, sample and sampling procedures, research instrument, pilot test, validity and reliability, ethical issues, and data collection and analysis procedures. This chapter ends with a summary.

3.2 Construction of Research Methodology

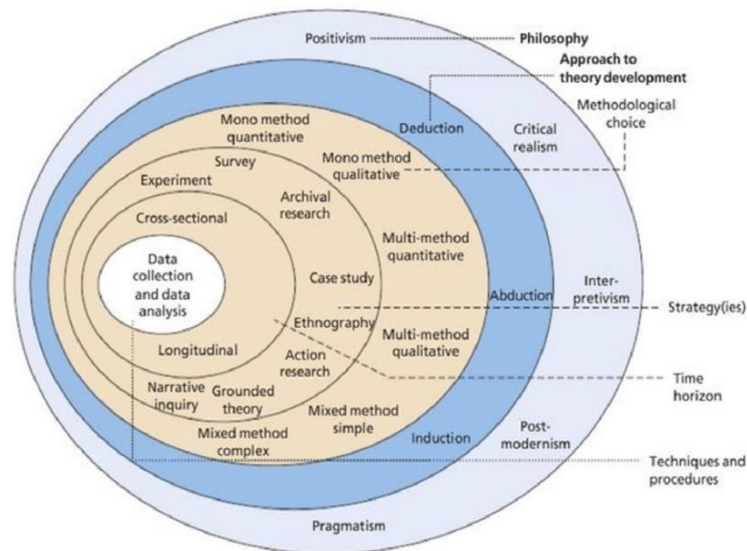


Figure 3.1: Research Onion. Adapted from: Saunders, Lewis, and Thornhill (2019)

The development of this study is centred on the construction of the research methodology recommended by Saunders et al. (2019). The research onion model was introduced to strengthen the research strategy to ensure methodology encompasses vital components in research. There are six significant layers in developing Research methodology: Philosophy, Approach to theory development, Methodological choice, Strategies, Time horizon, and Techniques and procedures.

3.2.1 Layer 1: Research Philosophy

The research philosophy is derived from delineating Epistemology, Ontology, and Axiology. Epistemology is the nature or source of knowledge, ontology is the nature of reality, and axiology is value, belief, and ethics in the study. The first layer of research Philosophy in research methodology refers to the philosophical theory: Positivism, Interpretivism, pragmatism, and critical realism (Saunders et al., 2019). Positivism is defined as a research philosophy that undertakes the assumption and manipulation of upcoming. Upcoming projections depending on the experience of present-day and previous—finding occurrences consistencies, based on causative, law-like and practical relationships, allows accurate estimation of upcoming occurrences by extrapolation. Interpretivism is defined as an approach that views subjective on the nature of reality (Ontology) postulation. This is based on the socially constructed reality that can be only done through social construction (Saunders et al., 2019). Pragmatism is the assumption that possible adapting with equally positivistic and interpretive stances is the for-research issue.

In contrast, critical pragmatism (realism) is viewed from two ontological beliefs where knowledge is obtained by discovering generative mechanisms. Research philosophy is crucial in every academic research due to offering an in-depth understanding of the

knowledge's nature, source and development (Saunders et al., 2019). It is crucial for research to design the study based on the process that differentiates the nature of the study, source, and root of knowledge development. In this study, research philosophy is rooted in positivism because it undertakes the assumption and manipulation of upcoming.

3.2.2 Layer 2: Approach to Theory Development

These three types of theory development in research methodology: Induction, deduction, and Induction. Deductive research logic is described as shifting from a standard rule to a specific law-like interpretation and is typically utilized for theory assessment. Inductive reasoning is a method of theory development that begins with observation based on which a standard directive is devised. According to Melnikovas (2019), in upcoming research, inductive reasoning is primarily linked with “insightful” methods, while deductive reasoning, based on tangible argumentation, is intended to regulate functions and explicit knowledge. Abductive reasoning is a kind of assumption, beginning with the observation of evidence-like indicators, which offer the fundamental concept for further study. Thus, the abductive inference is a best guess or conclusion based on available evidence. The justification for theoretical development is as follows: - the deductive segment is focused on explicit information and functions command, including applying physical arguments. Inductive reasoning, on the other hand, aims to regulate information via structural and categorical arguments, while abductive reasoning seeks to differentiate arrangements, relationships, viewpoints, and constraints through intellectual discussion. This study adopts the deductive approach in theory development by testing the study's general rule and law-like inference.

3.2.3 Layer 3: Methodological Choice

A study by Saunders et al. (2019) explained that methodological choice refers to adopting quantitative and qualitative research methods. The Mono method is a method of either choosing quantitative or qualitative methods. The quantitative method is a method that deals with number descriptive and inferential analysis, while the qualitative method is a method that deals with words, interviews, and documents that are more subjective in nature deal with and abstract (Saunders et al., 2019). The mono method is a single method that chooses from the quantitative or qualitative method, and the mixed method combines both qualitative and quantitative methods. At the same time, multimethod is a method that uses quantitative and qualitative and other methods to strengthen the study (Creswell et al., 2011). In this study, the mono method is used as a methodological choice due to research scoping aimed to be analysed quantitatively. The mono method is chosen in this study for several reasons, such as testing the assumption and confirming the concern based on the problem's nature statement and the study's objective.

3.2.4 Layer 4: Research Strategies

Strategies to carry out research methodology are based on the approach proposed by Saunders et al. (2019) which involves Experiment, Survey, Archival Research, Case Study, Ethnography, Action Research, Grounded Theory, and Narrative Inquiry. Since this study adopts the quantitative method as its methodological choice, survey design is used as a research strategy. The justification for survey design is to test the assumption and confirm the concern in the statement of problem and objective of the study. On top of that, this study adopted deductive approach theory based on explicit information and functions command, including the application of physical arguments. The alignment of methodological choice

and approach of theory development is crucial to ensure the research process is robust in terms of methodology.

3.2.5 Layer 5: Research Time Horizon

The time horizon in the research world depends on the study's objective. There are two types of time horizons in constructing research methodology: cross-sectional and longitudinal. Cross-sectional research is carried out in the short term and midterm, while longitudinal research is based on long-term research that requires investigating the pattern or trend of the problem (Saunders et al., 2019). In this study, Cross-sectional is used as its research time horizon based on the proposed study objective. A survey design is adopted that requires the time horizon of the study to be conducted as a cross-sectional study. On top of that, this study does not explore the trend, which requires continuous efforts to look at the pattern. The short term requires this study to specify and test the assumption based on concerns and issues in the study.

3.2.6 Layer 6 : Techniques and Procedures

According to Saunders et al. (2019), techniques and procedures involve selecting research tools, population selection, sampling techniques, step in data collection procedure, and data analysis procedure. This study is used a questionnaire as its research instrument. At the same time, the population in this study is Sarawak Civil Servant and Individual as its unit of analysis. Oversampling stratified sampling technique is used in this study to investigate from grade level 29 to grade level 54 and relevant scheme of service. The justification for the selected grade level is due to the significant key activities that are carried out by Sarawak Civil Service related to development and strategic tasks. The data collection procedure is followed standard steps starting with the request for permission to conduct the

study until the stage of the data collection procedure (refer to the data collection procedure section). Data Analysis in this study were used descriptive and inferential analysis that requires structural equation modelling as its primary analysis method.

3.3 Population and Sampling Procedure

Anderson, Sweeney and Williams (2011) defined population as a set consisting of every element of interest in a study. This is because the sample is drawn from the population using a specific sampling technique. It depends on the type of study conducted. The population includes everyone with the characteristics one wishes to understand (Hua & Ahmad, 2011). This study's unit of analysis focuses on individuals since the study is about emotional intelligence. Target populations in this study are from grade level 29 to 54 Civil Servants of Sarawak and relevant scheme of service.

The rationale for the selected population from grade level 29 to grade level 54 and relevant scheme of service is due to dealing directly with the strategy implementation, monitoring, planning, and organizing. Grade level from 29 to Grade 54 and relevant scheme of service is important in this study because these are the group of employees that acting as a government interface for all the service delivery to the citizen and other stakeholders. The procedure of population and sampling technique is defined in the sampling and process procedure section.

3.3.1 Sampling Process Procedure



Figure 3.2: Sampling Process Procedure

The sampling process procedure involves administering the sample to the targeted population. The first phase of the process involves identifying the study's target population. In this context, the population is Sarawak Civil Service. The second step is to select a sample frame from the intended population. In this case, from grade level 29 to grade 54 and relevant scheme of service in Sarawak Civil Service. The third phase is to determine the sampling method. This process involves taking a subset chosen sampling frame. The purpose is to make inferences and generalizations about the existing population (Taherdoost, 2018).

In this study, oversampling stratified sampling technique is adopted. The next phase involves selecting the sample size of the study. This study is used Gill et al.'s (2010) sample size table to determine the number of samples for the targeted population. The following process will collect the data when the sample size is determined. The last process is to assess the response rate. The response rate refers to the number of subjects that consent to participate in the research. According to Taherdoost (2018), these were selected examples from the original sample. Few researchers ever reach a response rate of 100 percent. This might be because of a respondent's reluctance to reply, ineligibility to respond, or incapacity to respond, or because the respondent has been discovered, but researchers cannot reach respondents.

3.3.2 Sampling Techniques

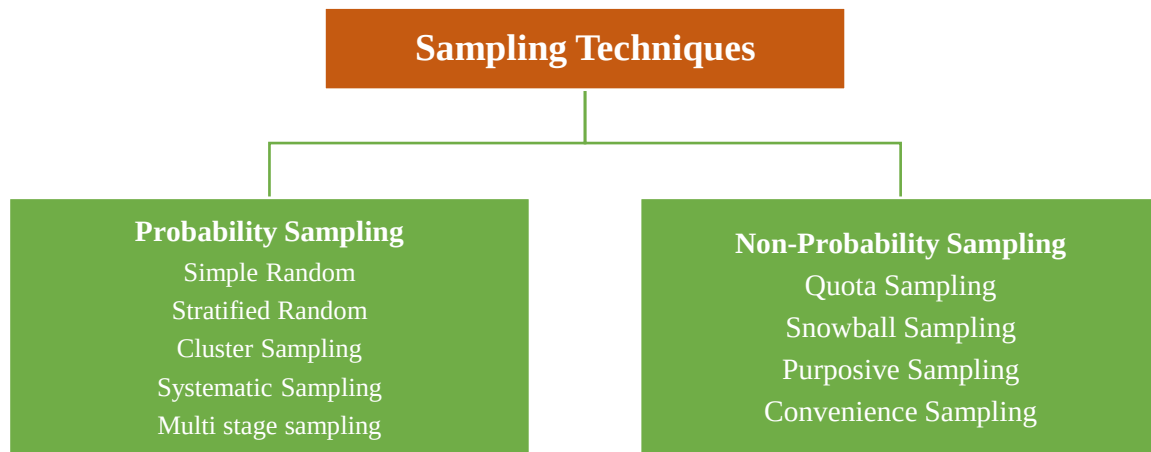


Figure 3.3: Sampling Techniques. Adapted from: Taherdoost (2018)

The research method involves two types of sampling techniques: probability and non-probability sampling. Probability sampling techniques comprise simple random, stratified random, cluster sampling, and systematic and multistage sampling. While non-probability sampling involves quota sampling, snowball, judgement, and convenience sampling. Most quantitative studies adopted probability sampling techniques. In comparison, the non-probability sampling procedure is popularly used in qualitative studies.

Probability sampling implies that each item in the population has an equal probability of being selected. A simple random sample ensures that each member of the population has an equal chance of being included in the sample. In contrast, "systematic sampling" refers to selecting each sample case following a random start (Creswell et al., 2011). Stratified sampling is a technique that divides the population into strata or subgroups and draws a

random sample from each segment (Saunders et al., 2019). A subgroup is a naturally occurring collection of elements. Subgroups may be formed depending on the size of the business, the gender of the workforce, or the vocation of the workforce (Taherdoost, 2018).

Stratified sampling is often utilised in populations with a high degree of variance, and its objective is to guarantee that each stratum is represented sufficiently. Cluster sampling is a technique that divides the population into clusters or groups. After that, a random sample is collected from each of these clusters, all included in the final sample (Creswell et al., 2011). Multi-stage sampling is a method for progressing from a large to a small sample size via a step-by-step procedure.

In this study, oversampling stratified sampling technique is adopted due to withdrawing a sample from specific strata. Eight strata in the Sarawak Civil Service population need to be defined when withdrawing the sample from grade 29 to grade 54 and relevant scheme of service.

3.3.3 Sample Size

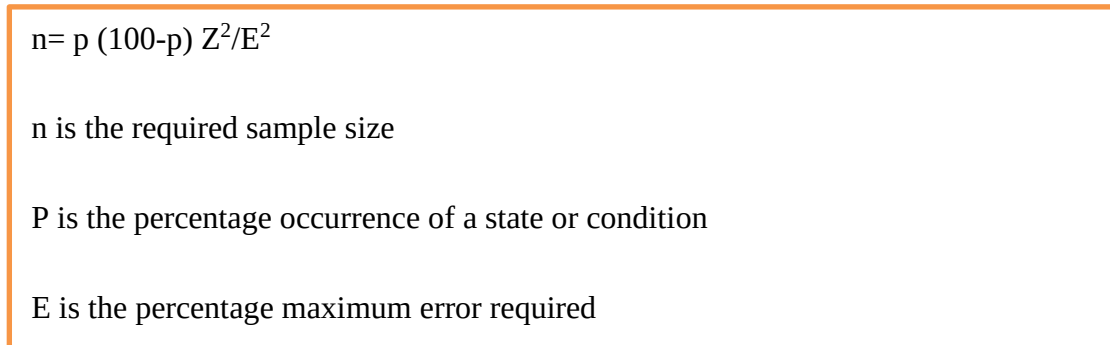
Table 3.1: Sample Size Table

Population	Confidence level=95% Margin of error			Confidence level=99% Margin of error		
	5	3	1	5	3	1
50	44	48	50	46	49	50
75	63	70	74	67	72	75
100	79	91	99	87	95	99
150	108	132	148	122	139	149
200	132	168	196	154	180	198
250	151	203	244	181	220	246
300	168	234	291	206	258	295
400	196	291	384	249	328	391
500	217	340	475	285	393	485
600	234	384	565	314	452	579
700	248	423	652	340	507	672
800	260	457	738	362	557	763
1000	278	516	906	398	647	943
1500	306	624	1297	459	825	1375
2000	322	696	1655	497	957	1784
3000	341	787	2286	541	1138	2539
5000	357	879	3288	583	1342	3838
10000	370	964	4899	620	1550	6228
25000	378	1023	6939	643	1709	9944
50000	381	1045	8057	652	1770	12413
100000	383	1056	8762	656	1802	14172
250000	384	1063	9249	659	1821	15489
500000	384	1065	9423	660	1828	15984
1000000	384	1066	9513	660	1831	16244

Adapted from: Gill, Johnson, and Clark (2010)

According to Gill et al. (2010), to generalize from a random sample while avoiding sampling mistakes or biases, the random sample must be sufficiently large. The sample adequacy relies on several factors that often confound persons doing surveys for the first time. The actual size of the sample picked concerning the complexity of the population, the researcher's objectives, and the types of statistical manipulation utilized in data analysis. Gill et al. (2010) also added that even though it is true that the greater the sample size, the less likely that results would be skewed, diminishing returns may rapidly set in once samples

exceed a specific size that must be weighed against the researcher's resources. Larger sample sizes are recommended to decrease sampling error but at a slower pace. Numerous statistical formulae exist for calculating sample size. Figure 3.4 shows the formula for sample size by Gill et al. (2010).


$$n = \frac{p(100-p)Z^2}{E^2}$$

n is the required sample size

P is the percentage occurrence of a state or condition

E is the percentage maximum error required

Figure 3.4: Sample size formulas. Adapted from: Gill, Johnson, and Clark (2010)

3.3.4 Procedure of Stratified Sampling Techniques in Sarawak Civil Service Population

A stratified random sampling technique is constructed by separating the population components into independently distinct, quasi sets of sample units called strata and then randomly picking a simple random sample within each stratum. Each sample unit must be allocated to a single stratum, and no unit may be omitted. Before identifying sample units, stratifying requires grouping the sampling units into reasonably homogenous categories. Strata are defined using the information other than the characteristic being measured that is known to vary or is assumed to fluctuate, with the characteristic being assessed in such a way that it is more homogeneous within strata than across strata. As a result, any factor that accounts for variation in the characteristic of interest may be used to define strata.

Oversampling stratified sampling technique is used, and this is due to the division and hierarchical levels of professional groups of the respondent in the Sarawak Civil Service. In this study, the target populations are the employees in the Sarawak Civil Service.

Table 3.2: Oversampling Stratified Sampling Technique Sarawak Civil Service from Grade level 29 to Grade 54 and Relevant Scheme of Service

Number	Job Grade	Total Number	Stratum Formula	Sample Size
1	29	3068	$381/5925 \times 3068$	197
2	32	279	$381/5925 \times 279$	18
3	36	199	$381/5925 \times 199$	13
4	41	1300	$381/5925 \times 1300$	84
5	44	570	$381/5925 \times 570$	37
6	48	300	$381/5925 \times 300$	19
7	52	120	$381/5925 \times 120$	8
8	54	89	$381/5925 \times 89$	6
Total		5925		381

The procedure of withdrawing the sample based on the oversampling stratified sampling technique is guided by the sample size table by Gill et al. (2010). In Sarawak civil service, five professional groups are involved regardless of the service's scheme. Each desired number stratum of the subgroup was divided based on the total number of population and times with subgroup total in order to get sample size for each stratum. For the support group, the grade 29 with determined sample size is 197, the grade 32 sample size is 18, and grade 36 is 13. As for professional level grade 41, the total stratum population is 84, for grade 44 sample size is 37. Grade 48 determined sample size is 19. Grade 52 with a determined sample size of 9. For grade 54, determined sample size is 6. This study's total sample sizes are collected based on population with total number 5925 are 381 samples, with the confidence level at 95 percent and a margin error of 5 percent.

3.4 Research Instrument

In this study, the questionnaire is used as a research instrument. The questionnaire is formulated and adopted from previous studies based on job scope and task. The questionnaire covers key areas: Emotional Intelligence, Organizational Readiness for Change, Digital competency, and Demographic Section. The questionnaire for this study is designed to get the data from respondents based on the quantitative objectives of this study.

The research instrument is adopted verbatim due to several factors. The medium of communication in Sarawak Civil Service is the English language. This study was adopted verbatim because of the validity and reliability of the previous studies conducted on the research instrument adopted in the Sarawak Civil Service Context. According to Korb (2012), the instrument's reliability and validity research is used to study without further validation proof. Another justification for adopting previous studies' instruments is due to the links from previous studies in a similar field and context. Adopting previous instrument help research save time instead of altering and modifying the context of the instrument (Korb, 2012). Table 3.3 shows the components of the questionnaire.

Table 3.3: Research Instrument

<u>Section</u>	<u>Items</u>	<u>Source</u>
A	<i>Emotional Intelligence</i>	<i>Schutte, Malouff & Bhullar, (2009)</i>
B	<i>Organizational Readiness for Change</i>	<i>Hallgrimsson, (2008)</i>
C	<i>Digital Competency</i>	<i>Abdulteef & Khateed, (2017)</i>
D	<i>Demography of respondent</i> <i>Gender</i> <i>Period of service</i> <i>Generation</i> <i>Level of academic qualification</i>	

All the sections on competencies had a 5-point Likert scale, as shown in Table 3.3 below. Respondents must rate a series of statements, and the values on this scale is used as a score for each respondent on each item.

Table 3.4: Likert Scale

Strongly Disagree (SD)	Disagree (D)	Neutral (N)	Agree (A)	Strongly Agree (SA)
1	2	3	4	5

3.4.1 Research Instrument Reliability

Table 3.5: Instrument Reliability in Previous Studies

Section	Inventory	Previous Studies/ year	Overall, Cronbach's alpha	Total Number of Items	Mode	Sample involved	Region
A	Schutte Self-Report Inventory (SSRI)	Schutte et al.,1998	0.90	33	Adopted	346 Community members	United State
B	Organizational Readiness for Change	Hallgrimsson, 2008	0.76	15	Adopted	164 samples in the research institute	Norway
C	Digital Competence	Abdulteeef & Khateeb 2017	0.90	26	Adopted	107 Teachers in Schools	UAE
D	Demographic Profile	-	-	5	-	-	-

This study has three sections: Section A Emotional Intelligence, Section B Organizational Readiness for Change, Section C Digital Competence, and Section D is Demographic Profile.

3.4.2 Section A: Schutte Self Report Inventory (SSRI)

Nicole Schutte developed Schutte Self Report Inventory (SSRI) in 1998 (Schutte, Malouff & Bhullar, 2009). The SSRI inventory was developed based on the ability model by Salovey and Mayer (1990) and the mixed model by Goleman (1995). The SSRI instrument aims to measure emotional intelligence based on four critical domains: Perception of Emotion, Managing Own Emotions, Social skills, and Utilizing emotion. SSRI is a self-report instrument. All the items from the previous study show high reliability with an overall Chronbach's alpha of 0.90. The number of items in SSRI is 33 items with reverse coding. In developing the SSRI instrument, 346 samples were withdrawn from the targeted population comprised of community members in the United States of America context.

3.4.3 Section B: Organizational Readiness for Change Inventory (ORFCI)

The organizational readiness for change inventory was developed by Hallgrímsson (2008). The instrument was developed based on organisational change theory concerning internal and external changes. The instrument is intended to measure readiness and resistance in employment and organizational context. The main domains involved in this instrument are: - Job satisfaction, Uncertainty, Commitment, and Change Readiness. All the items from the previous study show high reliability with an overall Chronbach's alpha of 0.76. Hair et al. (2012) proposed that the cut-off reliability figure is above 0.70. The number of items for this ORFCI instrument is 15 items with reverse coding. In developing the ORFCI instrument, 164 samples were withdrawn from the targeted population comprised of research institute members in the Norway context.

3.4.4 Section C: Digital Competence Instrument (DCI)

The digital competence Instrument (DCI) was developed by Abdulteeef and Khateeb (2017). The model of digital Competence (Walker & White, 2015) was adopted in developing DCI. The instrument was intended to measure digital competence from 5 perspectives, namely:- Information processing, Communication, Content Creation, Safety, and Problem Solving. All the items from the previous study show high reliability with an overall Chronbach's alpha of 0.90. Hair et al. (2012) proposed that the cut-off reliability figure is above 0.70. The number of items for this DCI instrument is 26 items. In developing the DCI instrument, 107 samples were withdrawn from the targeted population of teachers in the UAE context.

3.4.5 Section D: Demographic Profile

The demographic profile section involved the Demography of the respondent, Gender, Period of service, Generation, and Level of Academic Qualification. All the domains in this section were used to analyze the findings based on the research objective.

3.5 Pilot Study

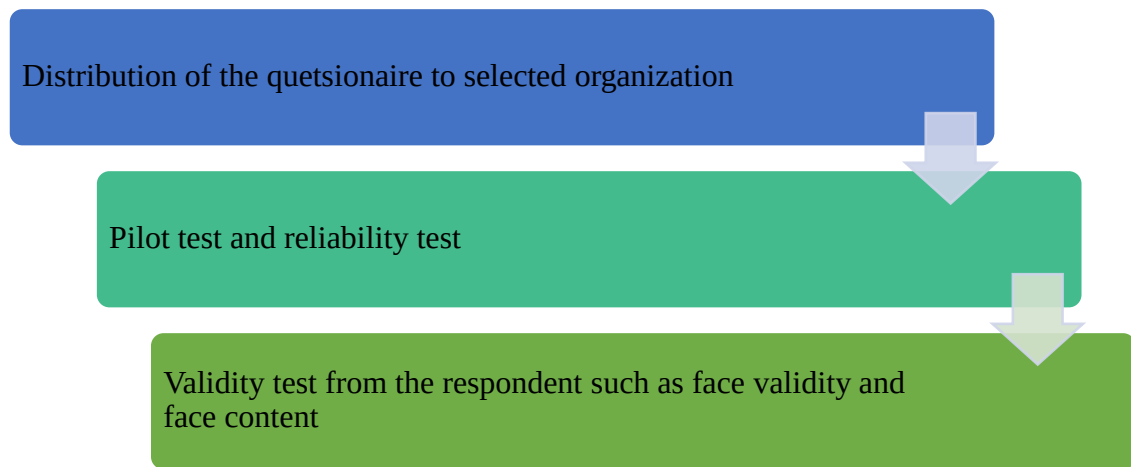


Figure 3.5: Pilot Study

The questionnaires were distributed to the organization involved in the quantitative approach piloting. The pilot study is crucial to get the respondent's validity test, such as face validity and face content. One hundred questionnaires each were used for the pilot study. The rationale for conducting the pilot study is to examine the feasibility of an approach intended to be used in the study (Saunders et al., 2019). A pilot study also helps the study explore potential error, reliability and validity and improvisation of research strategies if it contained any concern at the beginning of the study. Each research conducted needs to undergo this process to prove the study's feasibility by using a pilot study.

3.5.1 Expert Comments

Expert comments are significant to ensure the study instrument meets its requirements and etiquette and is suitable for the local context. The experts within the Sarawak Civil Service are given sets of research proposal and questionnaire for them to review and comment. The duration of the waiting is within 2 weeks. After two weeks, this study collected the comments from the experts.

The comments for quantitative questionnaire are: - reduce the number of statements, statements based on the Sarawak context, priority variable which come first example dependent variable, independent variable and last section is demography variables, an improvement on font size and questionnaire design to be more attractive. All the comments above were improved, and a questionnaire was sent to the experts for approval and review.

Table 3.6: Demographic Profile for Pilot Test

<u>Demography</u> <u>characteristic</u>			
Gender		F	%
	Male	33	33.0
	Female	67	67.0
	Total	100	100
Period of Service	Less than one year	5	5.0
	One year to 5 years	37	37.0
	6 year to 10 years	27	27.0
	10 years above	31	31.0
	Total	100	100.0
Grade	Grade 29	24	24.0
	Grade 32	3	3.0
	Grade 36	4	4.0
	Grade 41	37	37.0
	Grade 44	6	6.0
	Grade 48	4	4.0
	Grade 52	0	0
	Grade 54	1	1.0
	Other	21	21.0
	Total	100	100
Highest Level of Education	STPM/Diploma	28	28.0
	Degree	49	49.0
	Master	13	13.0
	Ph.D.	0	0
	Others Certifications	10	10.0
	Total	100	100.0

A pilot study was conducted with 100 samples to ensure the questionnaire meets its requirement. Four demographic factors were used in this study, namely gender, period of service, grade, and level of education. The dominant respondent for gender is female with

67 percent, followed by male with 33 percent. Period of service comprises four categories, less than one year with 5 percent, one year to 5 years with 37 percent, six years to 10 years with 27 percent, and ten years and above with 31 percent. There were 9 grade categories detected grade 29 with 24 percent, grade 32 with 3 percent, grade 41 with 37 percent, grade 44 with 6 percent, grade 48 with 4, grade 52 with 0 percent, grade 54 with 1 percent and another grade with 21 percent. The final demography variable, level of education, consisted of 5 categories: STPM/Diploma with 28 percent, Degree with 49 percent, Master with 13 percent, PhD with 0 percent and other qualification with 10 percent.

3.6 Validity, Reliability, and Normality

Some actions must be taken to ensure the questionnaire is valid and reliable. To increase validity, the questionnaire was shown to experts in the field. The experts in Sarawak Civil Service are proposed priority variable which come first example dependent variable, independent variable and last section is demography variables, an improvement on font size and questionnaire design to be more attractive. By doing validity tests such as face validity, construct validity, content validity, and criterion-related validity, the questionnaires are ensured to be distributed to the actual respondents.

Table 3.7: Summary of Exploratory Factor Analysis and Reliability Test

Validity and Reliability Items	Overall Validity and Reliability Items	Perception of Emotion	Managing Emotion In-Self	Social Skills	Utilizing Emotion	Organizational Readiness for Change	Digital Competency
KMO	.673	.733	.865	.865	.796	.755	.908
Bartlett's Test	7427.634 Sig.000	95.944 Sig.000	374.468 Sig.000	347.4 73 Sig.000	297.079 Sig.000	642.464 Sig.000	2376.207 Sig.000
Cronbach's	.957	.747	.758	.861	.868	.777	.962

For reliability, it was measured by Cronbach's Alpha. Cronbach's Alpha is translated as a percentage of difference where the experiential scale will be elucidated in a hypothetical absolute scale comprised of all items (Neill, 2008). Generally, an alpha value less than 0.6 is considered poor, while those with an alpha value of 0.7 are considered acceptable, and reliability above 0.8 is considered good. Factor analysis was used to determine sample adequacy, and factor loading should be reported to two decimal places and use descriptive labels in addition to item numbers (Neill, 2008).

Table 3.7 showed summary of exploratory factor analysis and reliability test. Overall sections or variables were tested using Cronbach's Alpha, perception of emotion with 0.747, managing of emotion at .758, social skills at .861, utilizing emotion at .868, organizational readiness for change was .777. The digital competency was at .962 overall result for Cronbach's Alpha was at .957 with sample adequacy KMO .673 and Bartlett's test at sig.000. The result for pilot validity and reliability showed high reliability and validity, as Neill (2008) suggested. Normality is defined as the "shape of the data distribution or an individual metric variable and its correspondence to the normal distribution, which is the benchmark for statistical methods" (Hair et al., 2012). Defilement of normality might affect the valuation process or the clarification of the output, especially in SEM analysis. According to Hair et al. (2012), skewness should be in the range of ± 0.2 and Kurtosis ± 0.3 , and the standard error should be in the range between .2 to .5. The normality result showed that there was no abnormal skewness and kurtosis error. All the constructs are within the range of .2 to .5. However, Hair et al. (2012) also suggested that assessment of normality shape distribution is essential to confirm the normality of the data before performing inferential statistics that require univariate and multivariate analysis.

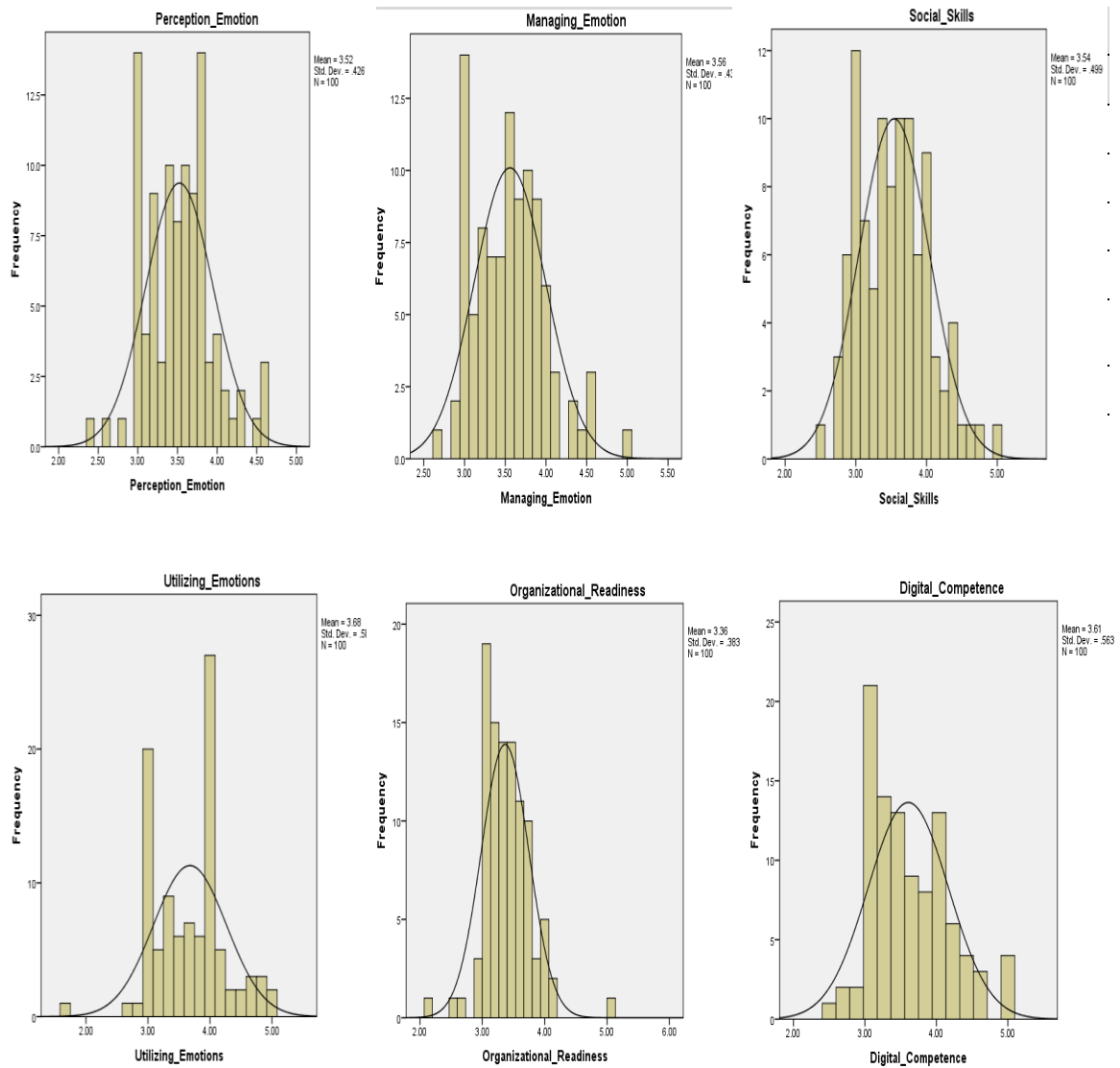


Figure 3.6: Shape of Data Distribution for Normality Test

The assessment of normality test distribution showed that all the constructs are typically distributed “Bell Shape Curve”, as Hair et al. (2012) suggested. This also confirms that the data were normally distributed and suitable for parametric testing. Based on the pilot study data, respondent responses are unique due to perception and the nature of preference in response to the questions. Therefore, the “Bell Shape Curve” represents respondents’ unique responses to the specific construct in the study. Normality assessment in this study is concluded as high normality and is highly recommended for parametric testing.

3.7 Convergent Validity, Average Variance Extracted, and Discriminant Validity

Construct's validity can be identified by evaluating convergent validity and discriminant validity, and it is described as the extent to which observed variables of a specific variable segment a more significant percentage of the difference in general (Hair et al., 2012). The formula below provides a more accurate calculation to measure internal reliability for construct reliability

$$CR = \frac{(\sum_{i=1}^n \lambda_i)^2}{(\sum_{i=1}^n \lambda_i)^2 + (\sum_{i=1}^n \delta_i)} \quad \text{Equation 3.1}$$

Factor loadings, average variance extracted, and construct reliability approximation are applied to measure the convergent validity of the constructs (Hair et al., 2012). Furthermore, Hair et al. (2012) proposed the best-standardized loading approximation between 0.7 or greater, AVE approximation between or above 0.5, and reliability approximation between the ranges of 0.70 to demonstrate acceptable convergent validity. Thus, this study adopted the least cut-off standards for loadings >0.7, AVE >0.5, and reliability >0.7 to evaluate convergent validity. This study will use the formula below to measure the Average Variance Extracted.

$$AVE = \frac{\sum_{i=1}^n \lambda_i^2}{n} \quad \text{Equation 3.2}$$

Discriminant validity is described as the degree to which a latent variable is genuinely dissimilar from other latent variables (Hair et al., 2012). Discriminant validity is evaluated by an approach proposed by Hair et al. (2012), in which the standard variation extracted for single variables is matched with the conforming squared inter-construct correlations (SIC), and the AVE approximation steadily greater than the SIC approximation indicates support for the discriminant validity of the factors. This technique is adopted in this study to measure the discriminant validity of each of the variables.

3.8 Outlier

Hair et al. (2012) portrayed anomalies as cases with scores that are mainly not quite the same as the rest of the perceptions in a dataset. There are two principal sorts of exceptions:-univariate and multivariate anomalies. A univariate exception is a situation with an extraordinary incentive on one variable, while a multivariate anomaly is a case with an irregular blend of qualities on at least two factors (Hair et al., 2012). Even though there is no outright judgment of extraordinary worth, a commonly acknowledged principle guideline is that scores above three standard deviations away from the mean might be considered exceptions (Hair et al., 2012). Outlier (anomalies) is significant to avoid the multivariate issue when adapting Structural Equation Modeling.

3.9 Ethical Considerations

Ethical considerations needed for this study are the issues regarding anonymity in which the respondent's name and identity need to be kept confidential, the right to withdraw from the study, and the need to send a consent letter to the head of a department as permission for this study. On top of that, research misconduct is also essential in this study. Study transgression means fabrication, misrepresentation, or plagiarism in planning, execution,

revising a study, or reporting research output. Four study misconducts are avoided in this study: Fabrication in altering the input, data, or output and recording or broadcasting them. While falsification controlling study materials, tools, or procedures, or replacing or omitting data or output such that the study is not precisely demonstrated in the study record. The study must also be reminded that ethical issues such as plagiarism are taboo in research. Plagiarism is the behaviour copywriting of another person's thoughts, procedure, output, or words or sentences without appropriate giving credit. Meanwhile, Research misconduct does exclude direct error or variances of judgment.

3.10 Procedure of Data Collection

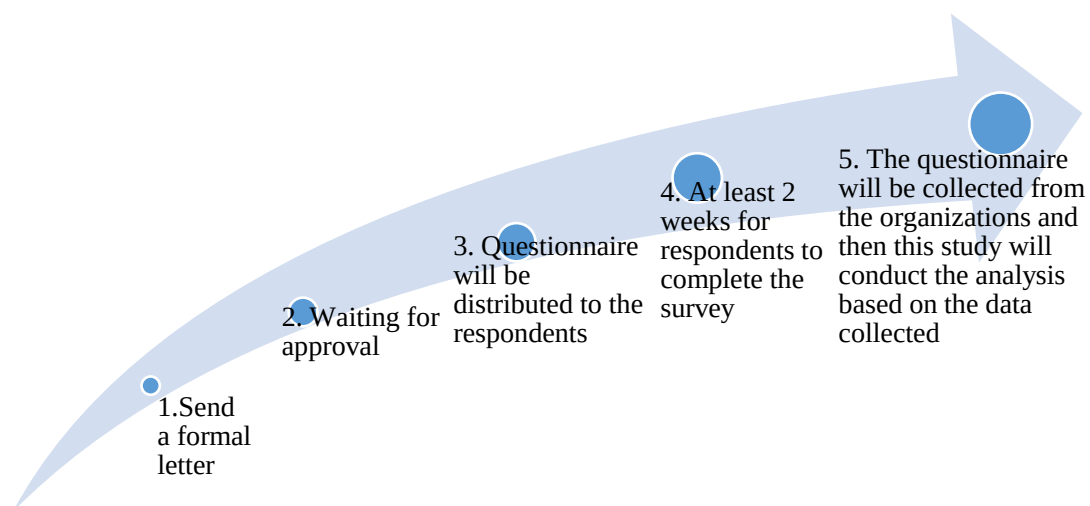


Figure 3.7: Data Collection Procedure. Adapted from: Fida, (2011)

In this study the data collection procedure is significant to gather information from respondents (Fida, 2011). The method of collecting data may vary based on the gatekeeper's and respondent's preference, such as mail, email, phone call, interview, teleconference, and documentation (Fida, 2011).

Since the use of the internet for data gathering is still a relatively new phenomenon in Sarawak, the study concentrated on the significant departments, ministries, and units to

get a representative sample of the population. Apart from that, the second reason is to save time and money since the population of potential participants is spread out across a large area of Sarawak. No doubt there will be a potential issue while collecting data on the ground, such as missing questionnaires, missing input, cooperation, technical issues on IT users, the distance of the targeted sample and other related issues.

There are a few steps involved in data collection. The first step in the data collection procedure is to send a formal letter to the department head from different organizations and respective respondents. During this stage, the head of the department was well informed regarding the study's intention and the unit of analysis involved in the study.

The second step in the data collection procedure is to get approval to conduct the study. The letter was sent to the head of the department and respective respondents to get the approval to conduct research. This exercise may take a few days and up to a week, depending on the inquiries and subject for endorsement of the targeted population. This stage is essential for every study to ensure the blessing comes from the targeted population.

The third steps are to distribute the questionnaire; this stage can only be operationalized when the gatekeeper or head of the department has been permitted to conduct the study. Once permission is granted, the survey will be distributed to the respondents. The questionnaire was sent to the targeted population personally, and it will take at least two weeks for respondents to complete the survey.

The fourth stage is the stage of waiting return of the questionnaire. This study's expected time to collect the respondent questionnaire is two weeks. After two weeks, the questionnaire was collected from the organizations.

The final stage of the data collection procedure is to collect the questionnaire and analyze the response rate collected from respondents before deciding to conduct an analysis.

3.11 Procedure of Data Analysis

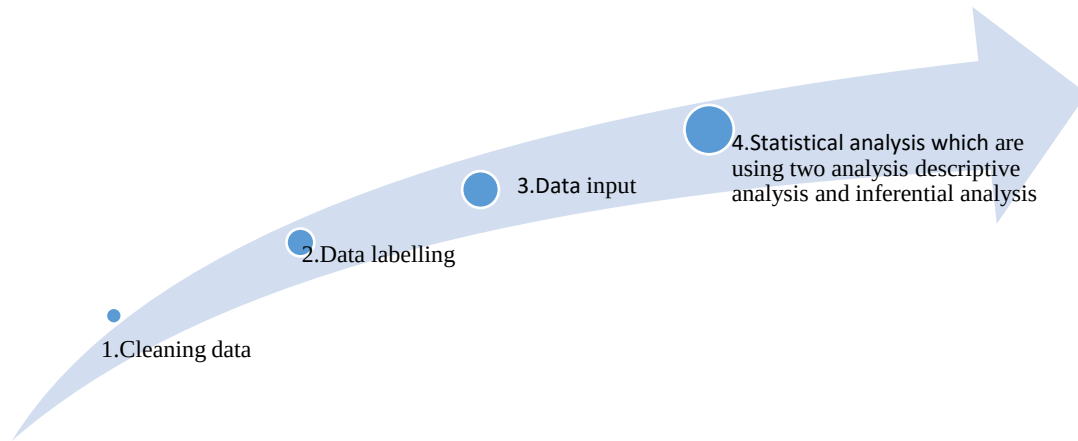


Figure 3.8: Data of Analysis Procedure. Adapted from: Fida, (2011)

In the quantitative method, there are five stages of analysis procedure required in this study: cleaning data, screening through the questionnaire, data labelling, data input, descriptive analysis, and inferential analysis. The first phase of analysis is the cleaning of data. This stage involves cleaning errors containing duplicate and incomplete data. The second stage of the procedure is screening through the questionnaire. This procedure involves the confirmation of data that is used for analysis. The third stage of the analysis procedure involved data labelling for independent and dependent variables. All the variables are labelled accordingly based on the purpose of the study. The fourth stage of the data analysis procedure is data input. All the data from the questionnaire are coded and keyed using the Software Package for Social Science (SPSS Version 20.0 for Student Version). The fifth stage of the data analysis procedure involved statistical analysis, which used descriptive analysis and inferential analysis. Descriptive analysis is used to describe demography background and respondents based on demography background. Structural

Equation Modelling (SEM) is used to develop a model, path analysis, and regression analysis. The analysis is conducted by using the Software Package for Social Science and AMOS 21 (SPSS Version 20.0 for Student Version).

3.11.1 Structural Equation Modeling and Model Implication

Structural Equation Modeling (SEM) software package called Analysis of Moment Structures (AMOS), version 21, is used in this research study to explore statistical relationships between the test items of each factor. In tandem with research objective to develop best fit model, the decision to choose SEM is important to make sure the model develop is fit. There are many types of structural equation modelling analysis that can be used in research namely: Partial Least Square (PLS), Generalization least Square (GLM) and Hierarchical Linear Modelling (HLM). As for partial least square, it can only be used to explore new variable and semi least square equation such as non-parametric test (Hair et al., 2012). Thus, it is not suitable for this study since the study involved confirmatory examination. Hair et al., (2012) mentioned that PLS can only be used to explore new variable and non-covariance in nature which is not suitable for model measurement. On the other hand, hierarchical least square is applicable due to single model to be test and develop. Therefore, the application of SEM generalization least square is the only model development and testing that is available to ensure the robustness of the measurement model and pathway analysis. As for model implication, Structural Equation modelling provided a method for validating links between constructs and indicators and testing interactions between constructs within a single model (Hoyle, 1995; Hair et al., 2012). Furthermore, it provided robust statistical tools for dealing with complicated models (Hair et al., 2012). SEM validates links between constructs and indicators using confirmatory factor analysis (CFA),

sometimes referred to as the measurement model, and relationships between constructs using the structural model.

3.12 Measurement Model

Confirmatory factor analysis is a significantly vital procedure of structural equation modelling (Hair et al., 2012) and is usually employed when some background knowledge of the fundamental structures and items are to be measured (Hair et al., 2012). Nevertheless, it is highly suggested that confirmatory factor analysis (CFA) ought to be performed after exploratory factor analysis (EFA) to validate and verify the scales obtained from EFA (Hair et al., 2012). In practice, unlike EFA, CFA is a method utilized to confirm a hypothesis about the link between a set of indicator variables (measurement items) and their respective latent variables. There are two broad approaches used in CFA to evaluate the measurement model: (1) deciding the goodness of fit (GOF) based on the sample size; if below 150, it should be $0.9 >$ if above 300 > 0.75 with CFI above > 0.9 . of criteria indices, (2) and evaluating the validity and reliability of the measurement model (Byrne, 2020; Hair et al., 2012). Therefore, many studies used the measurement model to measure the measure's uni-dimensionality, validity, and reliability.

Table 3.8: Measurement Model Decision Criteria

Fits Indexes		
CMIN/DF	5.0 < (Hair et al. 2012)	Normed Chi-square
p-Value	0.00< (Hair et al. 2012)	
RMSEA	0.8< acceptable and 0.5< Excellent (Hair et al. 2006)	Root mean square error of approximation
GFI	>.90 (Hair et al., 2012; Byrne, 2020)	The goodness of Fits Index (Optional due to sample sensitivity)
CFI	>.90 (Hair et al., 2012)	Comparative fit index
NFI	>.90 (Hair et al., 2012)	Normed fit index
Measurement model estimate		
Estimates	Recommendation Value	References
Factor Loading	Above 0.5 is acceptable above 0.7 is good	(Hair et al., 2012)
Critical Ratio (t-value)	It should be above 1.96	(Hair et al., 2012)
Standard Residual	Plus/minus 2.8	(Hair et al., 2012)

3.13 Bootstrapping Decision

Table 3.9: Bootstrapping Decision Criteria

Decision	Direct X -Y	X to Y	FULL MEDIATION		
			SIE	95% CI	
	P	BETA	P	P	0
Full mediation	S	Reduce	NS	S	Outside
Partial Mediation	S	Reduce	S	S	outside
No Mediation				NS	Inside
Indirect effect	NS		NS	S	outside

As for the mediation test, the decision is based on the criteria that were proposed by Hayes (2009). Therefore, the mediation test uses standard indirect effect and standard direct effect to measure whether there is any mediation in the related construct.

3.14 Chapter Summary

This chapter briefly presents the research design, population, sample and sampling procedures, instrument, pilot study, validity and reliability, ethical consideration, data collection procedure, and data analysis procedure.

CHAPTER 4

FINDINGS

4.1 Introduction

This chapter discusses the findings of the information from the distribution of the survey questionnaire. Data analyses are made based on the purpose of the study. This study used pathway analysis to analyse the effects among variables. Subsequently, Structural Equation Modelling was used to choose the best fit model. This chapter ends with a short summary.

4.2 Response Rate

Based on formula proposed by Gill et al. (2010) this study needs to collect total samples 381 based on population with total number 5925, confidence level at 95 percent and a margin error of 5 percent. The response rate for this study is 40.5 percent, with a total of received questionnaires 324 out of 800 questionnaires that were sent on 19 April 2022. There were 16 incomplete, and high missing value questionnaires received, and 308 samples were fully completed for the analysis. This study involved 308 respondents who were employees of Sarawak Civil Service.

Table 4.1: Response Rate

Return Questionnaire						
<u>Date of Distribution</u>	<u>Date of Received</u>	<u>Quantity of Distribution</u>	<u>Quantity of Received</u>	<u>Total complete questionnaire</u>	<u>Missing questionnaire and missing items</u>	<u>Return Percentage %</u>
14 March 2022	19 April 2022	800 units of quantitative questionnaires	324	308	16 incomplete and high missing value	40.5 percent

4.3 Preliminary Data Analysis

Preliminary data analysis in this study involves the analysis of missing value, assessment of outlier and normality test. Preliminary data analysis is important to ensure the requirement of parametric test and data distribution are passed for preliminary assessment(Hair et al., 2012). According to Awang et al. (2016) assessment on normality and outlier are mandatory when applying SEM analysis. The following section explains each of the preliminary data analysis comprises of missing value, outlier and normality test

4.3.1 Missing Value Analysis

Missing value is normally occurring in data analysis and occurs because of many reasons for instance incomplete response from respondent, data entry error, and double responses in one item. In this study, there were 16 incomplete questionnaires and high missing value. Missing value can be solved by using imputation analysis as recommended by Hair et al.(2012). However, it is only applicable if the missing value less than 15 percent for one construct. In this study, the missing value for 16 incomplete questionnaires are above 15 percent. Thus, it is recommended by Hair et al.(2012) not to include in the analysis because it may influence normality and multivariate issue.

4.3.2 Assessment of Outlier

Table 4.2: Potential Outlier

Observation number	Mahalanobis d-squared	p1	p2
75	195.423	.000	.000
283	172.755	.000	.000
123	166.217	.000	.000
205	155.403	.000	.000
308	155.010	.000	.000
31	150.925	.000	.000
60	150.570	.000	.000
134	144.327	.000	.000
126	141.250	.000	.000
80	139.163	.000	.000
117	138.677	.000	.000
47	135.664	.000	.000
32	135.130	.000	.000
14	126.021	.000	.000
231	125.127	.000	.000
137	124.399	.000	.000
221	123.453	.000	.000
63	123.414	.000	.000
277	120.492	.000	.000
295	120.365	.000	.000
291	120.019	.000	.000

There were 13 potential multivariate outliers in this study; the potential outlier did not result multivariate issues during the preliminary analysis, there was no deletion. Initially, there were 308 respondents in this study, and the fits index showed a better fit index; therefore, no deletion occurred. Hair et al. (2012) recommended that the deletion of outliers will increase fits indexes result nonetheless at the risk of restraining generalizability.

4.3.3 Assessment of Normality

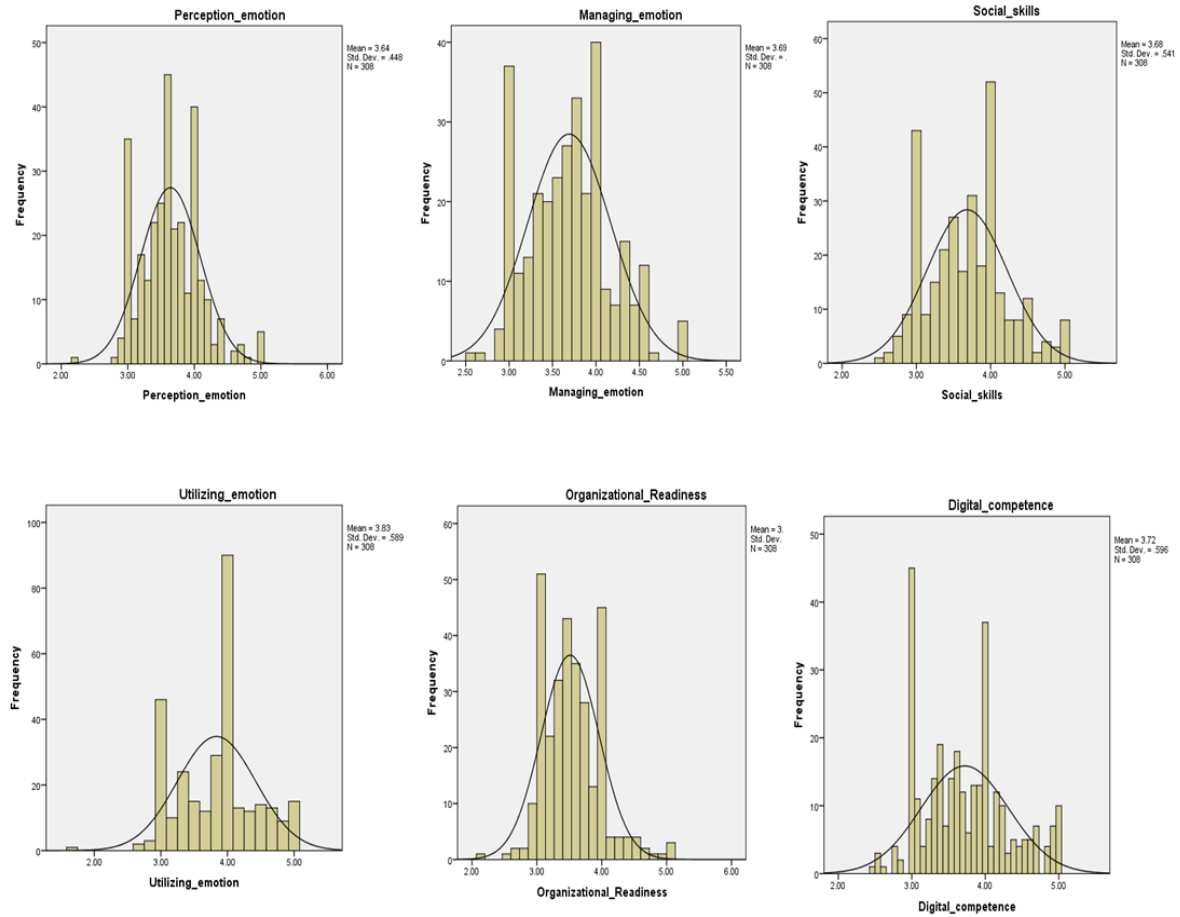


Figure 4.1: Shape of Normality Distribution

The assessment of normality test distribution showed that all the constructs are typically distributed “Bell Shape Curve,” as Hair et al. (2012) suggested. This also confirms that the data were normally distributed and suitable for parametric testing. Based on the field study data, respondent responses are unique due to perception and the nature of preference in response to the questions. Therefore, the “Bell Shape Curve” represents respondents’ unique responses to the specific construct in the study. Normality assessment in this study is concluded as high normality and is highly recommended for parametric testing.

4.4 Demographic Profile of Respondents

Sarawak, Bumi Kenyalang is located on Borneo Island with a population of almost 2.4 million. There are four primary races in Sarawak, with the majority being Malay, Dayak, Iban, Melanau Chinese, and 40 over ethnic groups all over Sarawak. The population in Kuching is currently increasing due to the birth rate increase and immigrants from Malaysia's peninsular and international immigrants. The population in this study covers parameters in Kuching. (Department of Statistics Malaysia, 2021).

Table 4.3: Demographic Profile

<u>Demography characteristic</u>			
Gender		F	%
	Male	126	40.9
	Female	182	59.1
	Total	308	100
Period of Service	Less than one year	26	8.4
	One year to 5 years	126	40.9
	Six year to 10 years	64	20.8
	10 years above	92	29.9
	Total	308	100
Grade	Grade 29	99	32.1
	Grade 32	19	6.2
	Grade 36	12	3.9
	Grade 41	101	32.8
	Grade 44	22	7.1
	Grade 48	12	3.9
	Grade 52	3	1.0
	Grade 54	2	0.6
	Other	38	12.3
	Total	308	100
Highest Level of Education	STPM/Diploma	114	37.0
	Degree	139	45.1
	Master	34	11.0
	Ph.D.	1	0.3
	Others Certification	20	6.5
	Total	308	100

Table 4.2 represents the demographic background of respondents from the Sarawak Civil Service. Most of the respondents were female with a frequency of 182 and 59.10 percent, followed by male respondents with a frequency of 126 and 40.90 percent, with total respondents 308. As for the period of service, the majority of respondents are from the period of service group 1 to 5 years with a frequency of 126 and 40.9 percent, followed by a period of service group 10 years and above with a frequency of 92 and 29.9 percent, period of service 6 to 10 years with frequency 64 and 20.8 percent and the lowest is period of service for less than one year with 26 and 8.4 percent.

For grade level, there were nine categories detected, and the highest is grade 41 with a frequency of 101 and 32.8 percent, the second-highest in grade 29 with a frequency of 99 and 32.1 percent, followed by other grades with a frequency of 38 and 12.3 percent, grade 44 with a frequency of 22 and 7.1 percent, grade 32 with a frequency of 19 and 6.2 percent, grade 36 with a frequency of 12 and 3.9 percent, grade 52 with a frequency of 3 and 1.0 percent and the lowest is grade 54 with a frequency of 2 and 0.6 percent.

For the highest levels of education, there were five groups in this study, STPM/Diploma, Degree, Master, PhD, and other certifications. The highest frequency and percentage is Degree group with a frequency of 139 and 45.10 percent, STPM/Diploma with a frequency of 114 and 37.0 percent, followed by Master with a frequency of 34 and 11.0 percent, other certification with a frequency of 20 and 6.5 percent and the lowest is PhD with a frequency of 1 and 0.3 percent.

4.5 Structural Equation Modelling (SEM) Analysis

Structural equation modelling is frequently used term as second-generation method that comprises of partial least square (PLS), generalization least square (GLM) and hierarchical linear modelling (HLM) (Awang et al, 2016). The application of SEM helps the study to validate measurement model of latent construct using confirmatory factor analysis (CFA), model measurement, structural model, hypothesis testing using pathway analysis, testing mediation and moderation (Awang et al, 2016). Before conducted confirmatory factor analysis it is mandatory for parametric test that has passed normality test to undergo reliability and validity test, construct validity, average variance extracted (AVE), and discriminant validity test (Hair et al., 2012). This study used GLM to test model measurement, structural model, hypothesis testing and mediation test. Structural model was conducted to determine the effects between observed and unobserved variables. Meanwhile, hypothesis testing was conducted based on structural model by using pathway analysis.

4.5.1 Reliability and Validity Test for Confirmatory Factor Analysis

The result from table 4.4 explained the reliability and validity test based on factor loading, average variance extracted (AVE), Composite Reliability (CR), and reliability test (Cronbach Alpha). The overall construct for the perception of emotion factor loading is above 0.60 with an average variance extracted of 0.511, composite reliability 0.862, and reliability test (Cronbach Alpha) with 0.860. Meanwhile, managing of emotion factor loading is above 0.60 as suggested by Hair et al. (2012) with an average variance extracted of 0.546, composite reliability 0.878, and reliability test (Cronbach Alpha) with 0.887. Social skills factor loading is above 0.60 with an average variance extracted of 0.547, composite reliability 0.878, and reliability test (Cronbach Alpha) with 0.870. Utilizing emotion factor

loading is above 0.60 as Hair et al. (2012) suggested with an average variance extracted of 0.508, composite reliability of 0.838, and reliability test (Cronbach Alpha) with 0.872. Organizational readiness for change factor loading is above 0.60 with an average variance extracted of 0.735, composite reliability 0.892, and reliability test (Cronbach Alpha) with 0.914. The last construct is digital competency factor loading is above 0.60 with an average variance extracted of 0.812, composite reliability 0.956, and reliability test (Cronbach Alpha) with 0.968.

Table 4.4: Reliability and Validity Test

Variable	Item	Factor Loading	AVE	CR	Reliability
Perception of Emotion	P9	0.72	0.511	0.862	0.860
	P6	0.74			
	P5	0.78			
	P4	0.73			
	P3	0.65			
	P2	0.66			
Managing of Emotion	M2	0.74	0.546	0.878	0.887
	M3	0.66			
	M4	0.76			
	M5	0.75			
	M6	0.76			
	M7	0.76			
Social Skills	S1	0.66	0.547	0.878	0.870
	S4	0.65			
	S5	0.80			
	S6	0.80			
	S7	0.73			
	S8	0.78			
Utilizing Emotion	U1	0.77	0.508	0.838	0.872
	U3	0.70			
	U4	0.70			
	U5	0.73			
	U6	0.66			
Organizational Readiness for Change	2 nd order (Job)	0.82	0.735	0.892	0.914
	2 nd order (Change)	0.87			
	2 nd order (Ready)	0.88			
Digital Competency	2 nd order (DCI)	0.87	0.812	0.956	0.968
	2 nd order (DCC)	0.96			
	2 nd order (DCCC)	0.84			
	2 nd order (DCS)	0.94			
	2 nd order (DCP)	0.89			

Table 4.5 showed construct validity (CR), average variance extracted (AVE), and discriminant validity. Digital competency with construct validity of 0.956, average variance extracted with 0.814, and discriminant validity with 0.902. followed by Organizational readiness for change with construct validity of 0.892, average variance extracted with 0.734, and discriminant validity of 0.857. While for emotional intelligence with construct validity

Table 4.5: Construct Validity, Average Variance Extracted, and Discriminant Validity

	CR	AVE	MSV	ASV	Digital Competency	Org Readiness for Change	Emotional Intelligence
Digital Competency	0.956	0.814	0.554	0.470	0.902		
Org Readiness for Change	0.892	0.734	0.605	0.496	0.622	0.857	
Emotional Intelligence	0.961	0.860	0.605	0.579	0.744	0.778	0.927

4.5.2 Measurement Model

Confirmatory factor analysis in this study was conducted accordingly, and the result was measured by using a model measurement that consisted of Good fit Index (GFI), Chi-square and degree of freedom (CMIN/DF), Root mean square error of approximation (RMSEA), Normated fit index (NFI) and Comparative fit index (CFI). The results for the Measurement model showed that the Good fit index was at 0.769, as proposed by Byrne (2020) and Hair et al. (2012) which was considered an acceptable good fit. Byrne (2020) and Hair et al. (2012) also explained that if the sample size exceeds 250, it will influence the good fit index. Thus, it is suggested if the sample size 150 or below has to be 0.9 and above; for the sample above 150 to 200 GFI 0.8 and above, while a big sample size above 250 good fit index is recommended with 0.75 with CFI above 0.9 as an incremental fit index. Fan and Sivo (2005) explained that misinterpretation of fit indices might lead to misalignment from

the actual model and univariate issues. Fan and Sivo suggested RMSEA, CFI, NFI, and ILI are critical to be measured in model measurement instead of focusing too much on other indices. Byrne (2020) and Wang et al. (2016) study also mentioned the best practice based on empirical studies conducted and relevant literature related to assessment of model fit recommended that GFI is an alternative and not recommended since GFI is affected by sample size and it may overrule the purpose of measuring model. Thus, it is recommended to use CFI, NFI, TLI, Chi-Square, and RMSEA. Another study conducted by MacCallum and Hong (1997) and Sharma et al. (2005) on cut-off fit indices and model assessment recommended that GFI is no longer relevant since it is affected by the sample and does not critically measure the model fits and is also unable to reflex error in the model. West et al. (2017) also suggest adopting the non-centrality technique in measuring model for structural equation model by considering Root mean square error of approximation below 0.08, Comparative Fit Index (CFI) above 0.9, Normated Fit Index(NFI) above 0.8, and Tucker Lewis Index (TLI) above 0.9. As for Chi-square and Degree of freedom, the result showed that CMIN/DF was below 5.0 (Hair et al., 2012) with the value of 1.842 at the significant value of .000. Root mean square error of approximation (RMSEA) was at 0.052, which was below 0.08 (Hair et al. 2012), Normated Fit Index (NFI) was at 0.835 (Hair et al. 2012), and Comparative fit index (CFI) was at 0.916.

4.5.3 Findings of Measurement Model

The result for the Measurement model in this study was at an acceptable level and met the measurement level. Figure 4.2 shows the measurement model derived from the study's hypotheses. There were a few items deleted due to low factor loading. In this study, the digital competency construct consisted of 26 items, and only one was deleted due to low

factor loading as a model measurement requirement (Hair et al., 2012). For Organizational readiness for change construct consisted of 15 items, and six were deleted due to low factor loading. Meanwhile, emotional intelligence constructs consisted of 33 items, and ten items were deleted due to low factor loading. Hair et al. (2012) stated that low factor loading during confirmatory factor analysis would jeopardize the output of the study. Therefore, in this study, 57 items out of 74 were equivalent to the remaining 77 percent, with 23 percent deleted items. The items were deleted due to low factor loading. To support this decision, Hair et al. (2012) explained in their study that low factors loading can only be deleted after considering modification index failed to improve absolute fit index, particularly for relative chi-square and root mean square approximate. All the deletion items aforementioned have been modified by deleting all modification indices (MI) above 15.00. After considering that MI no longer influences the absolute fit index. The decision to delete the low-loading item was considered; this item was deleted based on the recommendation by Hair et al. (2012). On top of that, another issue that might influence the deletion of the items in this study is social desirability bias. Social desirability bias is the “Bias phenomenon” that occurs when respondents tend to answer the statement randomly due to referring to the previous pattern of the statement (Hair et al., 2012).

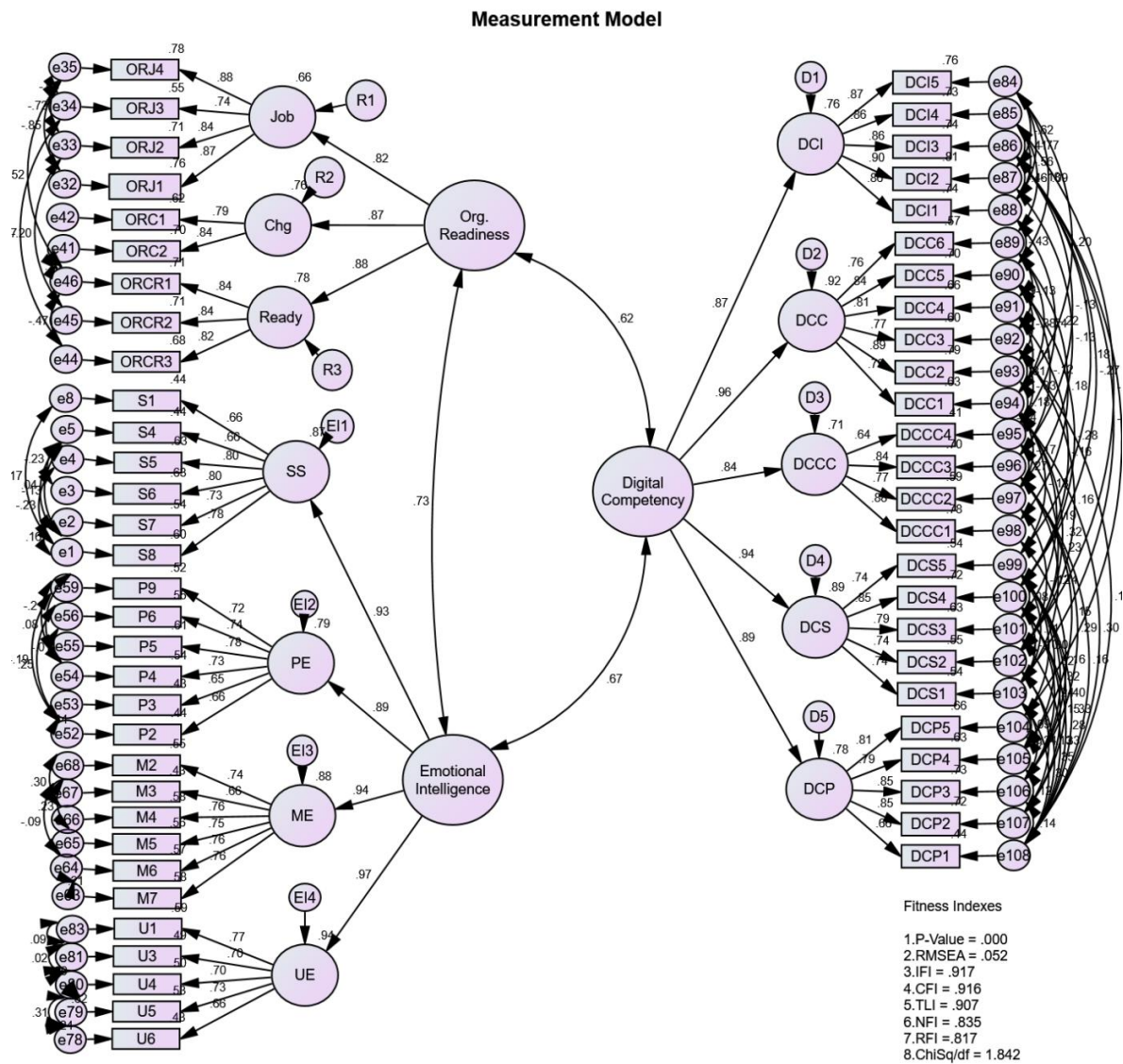


Figure 4.2: Measurement Model

4.6 Structural Model

In this study, the structural model was performed based on the objective and hypothesis of the study guided by digital competency, organizational readiness for change, and the emotional intelligence model. The purpose of the structural model in the study is to establish the model fit and explore pathway analysis of the study after performing the measurement model through confirmatory factor analysis (Hair et al., 2012). The study's structural model reflects the study's conceptual framework. Thus, testing the hypothesis as an overall model through pathway analysis is essential. In structural modelling pathway assessment, four criteria are critical to analysing the pathway analysis: standard regression, standard error (S.E), critical value, and p-value (Hair et al. 2012). Model fit indices at this stage are no longer required as a measurement model through fit indices was performed to test model fit.

Pathway analysis from emotional intelligence and organizational readiness for change is with standard regression of 0.896 (strong positive effect) with S.E 0.073, C.R 12.237, and p-value at 0.000. Emotional intelligence and digital competency with standard regression of .579 (moderate positive effect) with S.E 0.091, C.R 6.346, and p-value of 0.000. While organizational readiness for change and digital competency with standard regression of 0.276 (weak positive effect) with S.E 0.078, C.R 3.554, and p-value of 0.000

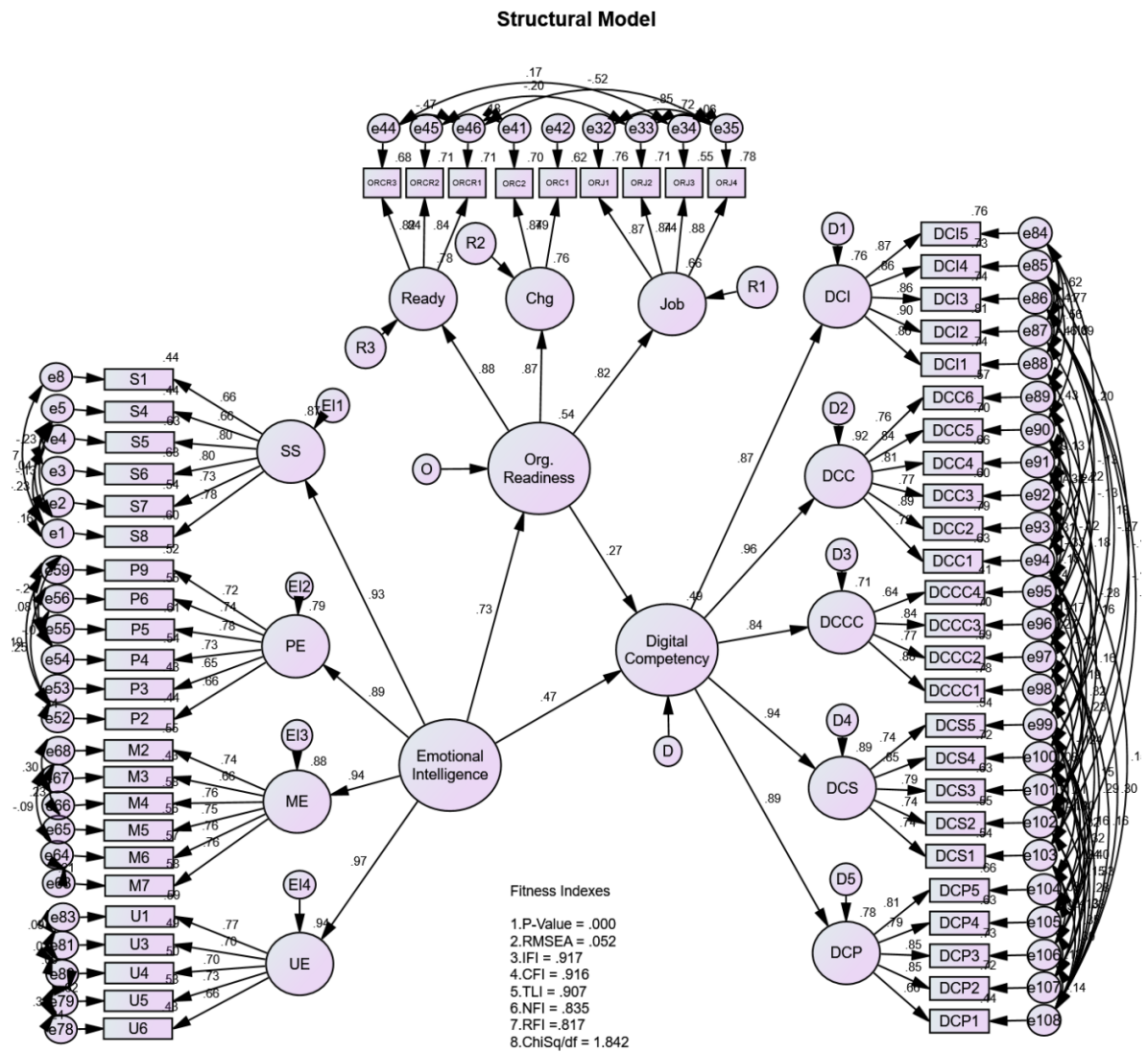


Figure 4.3: Structural Model

4.7 Pathway Analysis

There were seven hypotheses in the study; all the hypotheses need to be tested based on the analysis that was determined in chapter 3 and based on the study's objective and design. Pathway analysis in this study will explore the strength of effect and effect size of the mediation and test the hypothesis testing by using the structural equation modelling method through pathway analysis (Wang et al., 2016; Hair et al., 2012). Figure 4.3 shows pathway analysis of emotional intelligence, organizational readiness for change, and digital competency.

The pathway from the perception of emotion to organizational readiness for change with standard regression of 0.760 (moderate positive effect), S.E of 0.097, C.R of 7.840, and p-value at 0.000. Organizational readiness for change to digital competency with standard regression of 0.363 (weak positive effect), S.E of 0.071, C.R of 5.083, and p-value at 0.000. Meanwhile, a pathway from the perception of emotion to digital competency with standard regression of .0487 (weak positive effect), S.E of 0.90, C.R 5.386, and p-value at 0.000.

Figure 4.5 shows pathway analysis of managing emotion, organizational readiness for change, and digital competency. A pathway from managing emotion to organizational readiness for change with standard regression of 0.714 (moderate positive effect), S.E of 0.070, C.R of 10.173, and p-value at 0.000. Organizational readiness for change to digital competency with standard regression of 0.233 (weak positive effect), S.E of 0.082, C.R of 2.863, and p-value at 0.004. Meanwhile, a pathway from managing emotion to digital competency with standard regression of .0489 (weak positive effect), S.E of 0.085, C.R 5.784, and p-value at 0.000.

Figure 4.6 shows pathway analysis of social skills, organizational readiness for change, and digital competency. A pathway from social skills to organizational readiness for change with standard regression of 0.783 (moderate positive effect), S.E of 0.074, C.R of 10.519, and p-value at 0.000. Organizational readiness for change to digital competency with standard regression of 0.216 (weak positive effect), S.E of 0.074, C.R of 2.643, and p-value at 0.008. Meanwhile, a pathway from social skills to digital competency with standard regression of 0.0545 (moderate positive effect), S.E of 0.091, C.R 5.998, and p-value at 0.000.

Figure 4.7 showed pathway analysis of utilizing emotion, organizational readiness for change, and digital competency. A pathway from utilizing emotion to organizational readiness for change with standard regression of 0.858 (strong positive effect), S.E of 0.100, C.R of 8.542, and p-value at 0.000. Organizational readiness for change to digital competency with standard regression of 0.144 (weak positive effect), S.E of 0.094, C.R of 1.535, and p-value at 0.125. Meanwhile, a pathway from utilizing emotion to digital competency with standard regression of 0.692 (moderate positive effect), S.E of 0.128, C.R 5.427, and p-value at 0.000.

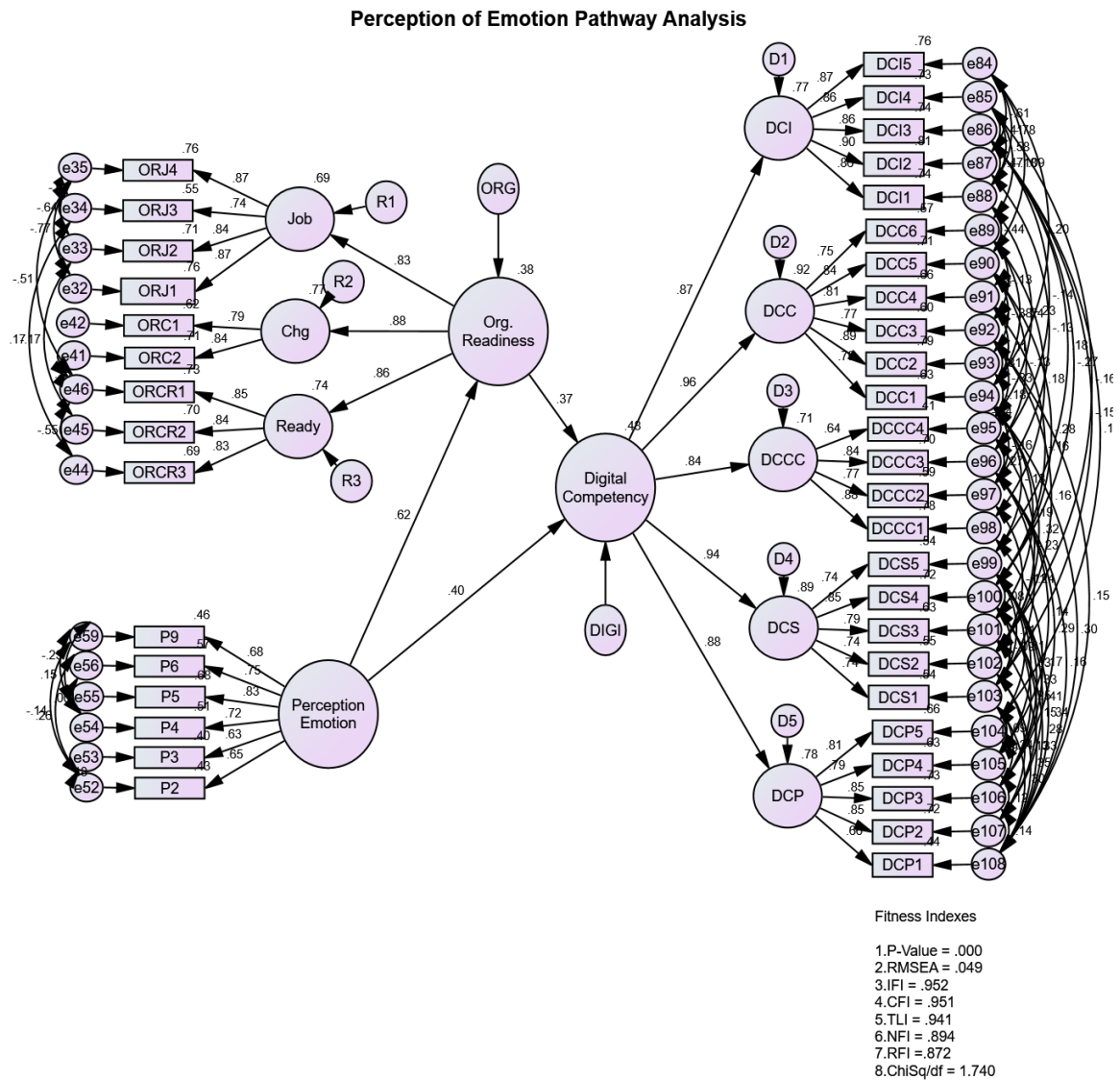


Figure 4.4: Perception of Emotion Pathway Analysis

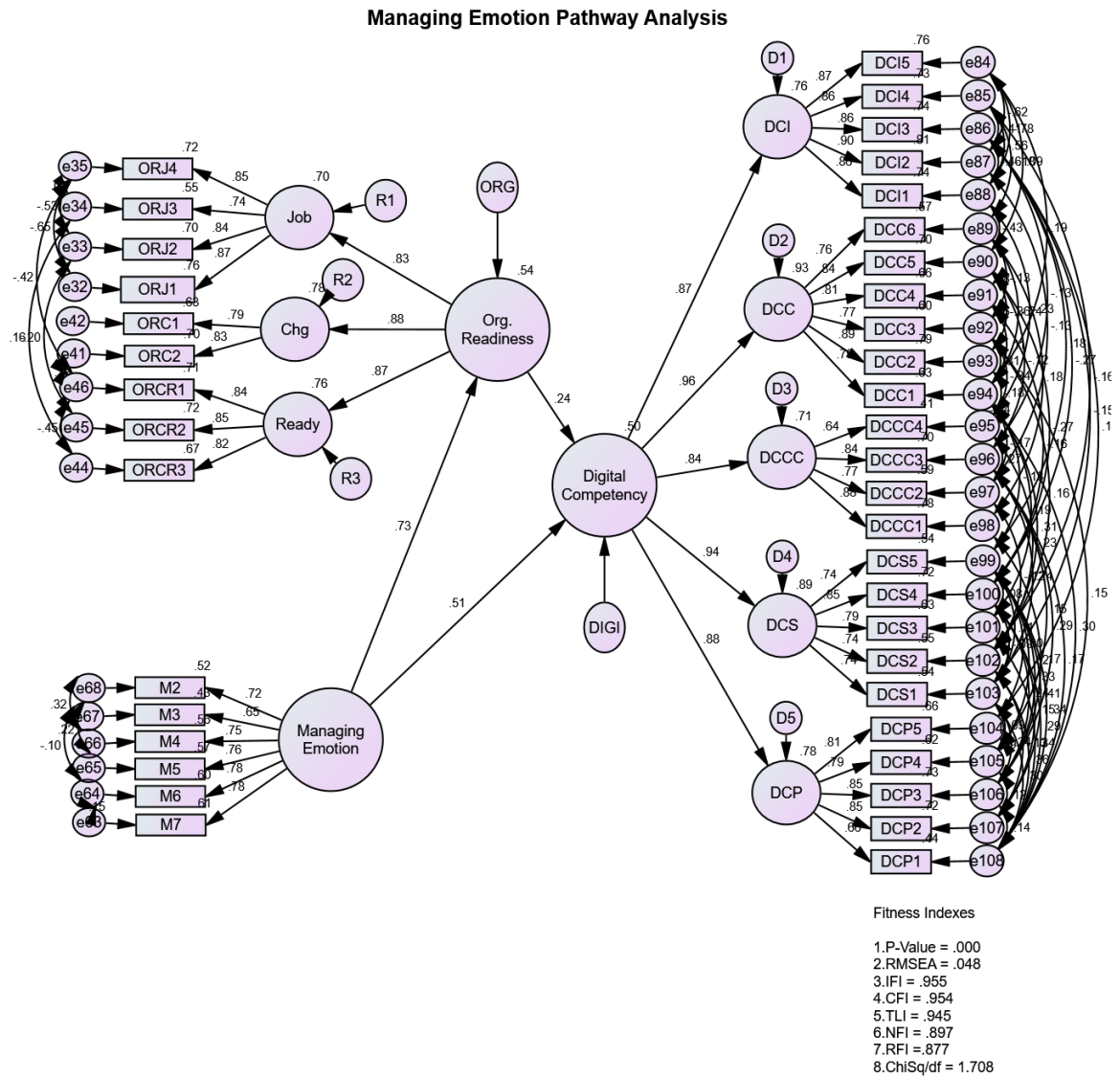


Figure 4.5: Managing Emotion Pathway Analysis

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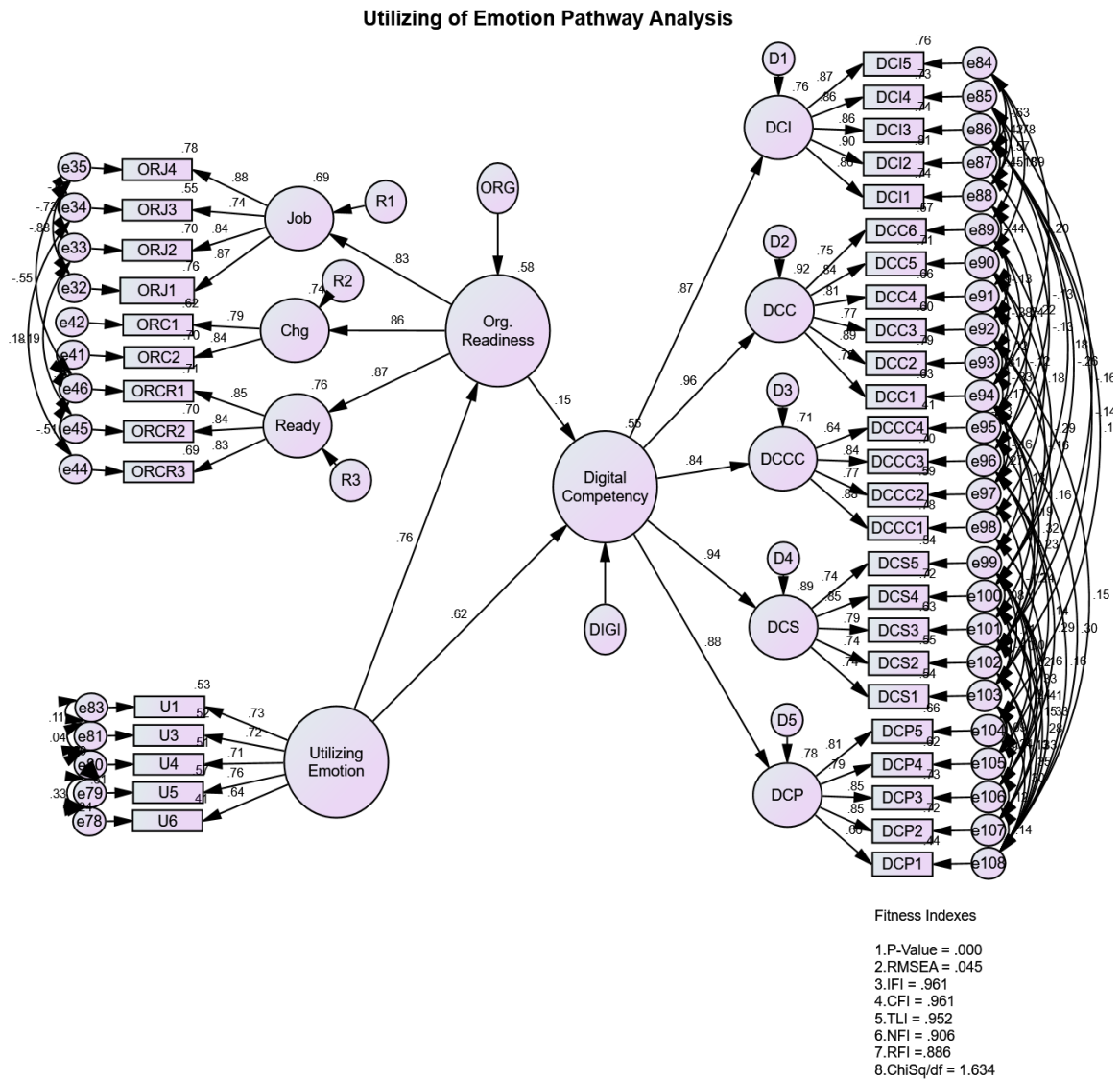


Figure 4.7: Utilizing Emotion Pathway Analysis

4.8 Result for Hypothesis Testing Based on Research Objective

Result in the hypothesis testing is based on the identified research objectives, first research objective is to determine the effect of perception of emotion on digital competency. The first hypothesis for the findings showed that the direct effect from the perception of emotion and digital competency was at $\beta = .487$, t-value was $=5.386$, and a significant value at $p=.000$. Therefore, alternate hypothesis 1 is supported. Second research objective is to determine the effect of managing emotion in self on digital competency. The second hypothesis for the findings showed alternate Hypothesis 2 on managing emotion to digital competency, which showed that $\beta = .489$ and t-value were at $=5.784$ and significant value at $p=.000$, alternate hypothesis 2 is supported. Third research objective is to determine the effect of social skills on digital competency. The third hypothesis for the findings showed alternate hypothesis 3 on social skills to digital competency was at $\beta = .545$ and t-value were at $=5.998$ and significant value at $p=.000$ thus, alternate hypothesis 3 is supported. Fourth research objective is to determine the effect of utilizing emotion on digital competency. Fourth hypothesis for the findings showed alternate hypothesis 4 on utilizing emotion and digital competency. The finding showed that $\beta = .692$ and the t-value was at $=5.427$ and a significant value at $p=.000$. Therefore, hypothesis 4 is also supported. Based on the result of pathway analysis for direct effect in the structural model constructs, it showed that there was a strong positive effect on emotional intelligence and organizational readiness for change as mediating with β coefficient $=.896$, t-value $=12.237$ and significant value at $p=.000$., Organizational readiness for change and digital competency with β coefficient $=.276$, t-value $=3.554$, and significant value at $p=.000$. While emotional intelligence and digital competency with β coefficient $=.579$, t-value $=6.346$, and significant value at $p=.000$. Thus, alternate hypothesis 5 to test preliminary mediation before bootstrapping is significant. Squared Multiple Correlations for

organizational readiness for change was $R^2.539$, which is a large effect size and Digital Competency with $R^2.488$ with a large effect size.

Table 4.6: Pathway Analysis

	Hypotheses	Std Beta (β)	t-value	p-value
Ha1	There is a significant effect of Perception of Emotion on Digital Competency	0.487	5.386	.000
Ha2	There is a significant effect of Managing Emotion in Self on Digital Competency	0.489	5.784	.000
Ha3	There is a significant effect of Social Skills on Digital Competency	0.545	5.998	.000
Ha4	There is a significant effect of Utilizing Emotion on Digital Competency	0.692	5.427	.000

Preliminary Mediation Test

	Hypothesis	Structural Model	Std Beta (β)	t-value	p-value
Ha5:	There is a mediating effect of Organizational Readiness for Change on Emotional Intelligence and Digital Competency	Emotional intelligence →Organization Readiness for Change	.896	12.237	.000
		Organization Readiness for Change→ Digital Competency	.276	3.554	.000
		Emotional intelligence →Digital Competency	.579	6.346	.000
Squared Multiple Correlation : Organizational Readiness for Change R².539 , Digital Competency R².488					

Note: * $p \leq .05$

4.9 Best Fit Model Indexes Measurement

Best fit model in this study were adopted based on suggestion by Hair et al.(2012). Best fit model comprises of absolute fit (RMSE,CFI and p-value), incremental fit (TLI and NFI) and parsimony fit(RFI and IFI). Fit model recommended were CMIN/DF was used to determine the stability of the model suggested less than 5.0, RMSEA less than 0.8, p-value less than 0.00, CFI above 0.9, TLI above 0.9 NFI above 0.8, RFI above 0.8 and IFI above 0.8 (Hair et al., 2012). Final fit indices for the structural model showed that chi-square was at 1.842, the p-value was at .000, RMSEA was at .052, CFI was at .916, TLI was at .907, NFI was at .832, RFI was at .817 and IFI was at .917. Therefore, this analysis concluded that the model was developed fulfilled the best fit indexes. Research objective 6 to develop the best fit model is fulfilled based on the fits indexes requirement.

Table 4.7: Fits Indexes

CMIN/DF	5.0 < (Hair et.al,2012)
p Value	0.00< (Hair et.al,2012)
RMSEA	0.8< acceptable and 0.5< Excellent (Hair et,2006)
CFI	>.90 (Hair et.al,2012)
TLI	>.90 (Hair et.al,2012)
NFI	>.80 if the sample is more than 300 or less than 150
RFI	>.80 if the sample is more than 300 or less than 150
IFI	>.80 if the sample is more than 300 or less than 150

4.10 Mediation Test

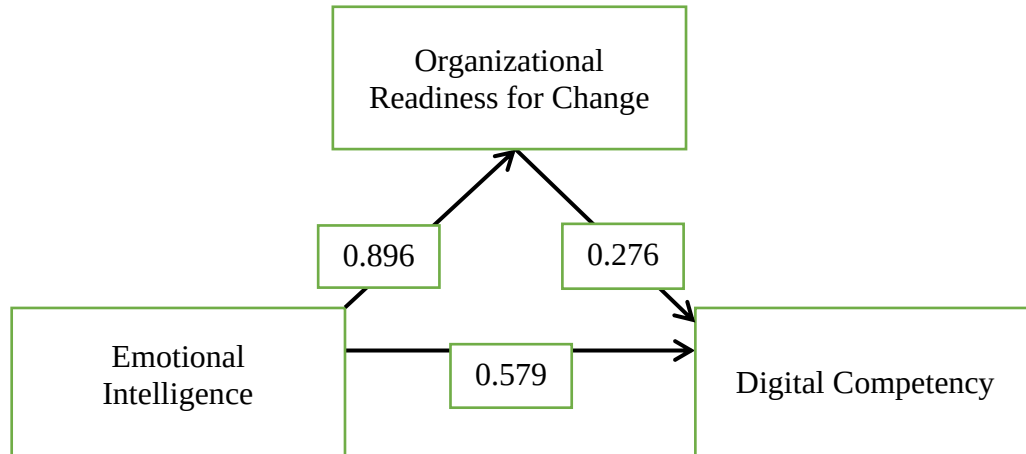


Figure 4.8: Mediation Test for Emotional Intelligence, Organizational Readiness for Change and Digital Competency

Result for mediation test was based on research objective 5 is to determine the mediating effect of organizational readiness for change on emotional intelligence and digital competency. The indirect effect = $0.896 \times 0.276 = 0.247296$, the direct effect = 0.579, since from path emotional intelligence to organizational readiness for change is significant, and emotional intelligence to digital competency is also significant after the mediator enters the model. Therefore, the mediation test findings showed a partial mediation occurs.

Table 4.8: Mediation Test for Emotional Intelligence, Organizational Readiness for Change, and Digital Competency

	Pathway	Estimate	S.E	C.R	P-value	Result
Y (Digital Competency)	← X ₁ (Emotional Intelligence)	.579	.091	6.346	.000	Significant
M (Organizational Readiness for Change)	← X ₁ (Emotional Intelligence)	.896	.073	12.237	.000	Significant
Y (Digital Competency)	← M (Organizational Readiness for Change)	.276	.078	3.554	.000	Significant

Table 4.9: Summary of Findings

<u>Research Objectives</u>	<u>Research Hypotheses</u>	<u>Analysis</u>	<u>Hypothesis</u>
1.To determine the effect of perception of emotion on digital competency.	Ha1: There is a significant effect of Perception of Emotion on Digital Competency	SEM (Regression analysis)	H _a 1 Supported
2.To determine the effect of managing emotion in self on digital competency.	Ha2: There is a significant effect of Managing Emotion in Self on Digital Competency	SEM (Regression analysis)	H _a 2 Supported
3.To determine the effect of social skills on digital competency.	Ha3: There is a significant effect of Social Skills on Digital Competency	SEM (Regression analysis)	H _a 3 Supported
4.To determine the effect of utilizing emotion on digital competency.	Ha4: There is a significant effect of Utilizing Emotion on Digital Competency	SEM (Regression analysis)	H _a 4 Supported
5.To determine the mediating effect of organizational readiness for change on emotional intelligence and digital competency.	Ha5: There is a mediating effect of Organizational Readiness for Change on Emotional Intelligence and Digital Competency	SEM (Bootstrapping analysis)	H _a 5 Supported (Partial Mediation)

4.11 Chapter Summary

In summary, the findings in this study were analysed using quantitative data analysis methods namely: structural equation modelling for confirmatory factor analysis, measurement model, pathway analysis and finally, bootstrapping analysis. The following chapter discusses the main findings concerning the literature gathered. It also relates the implications, a summary of the research, recommendations, and finally, the conclusion section.

CHAPTER 5

DISCUSSION, IMPLICATIONS, AND RECOMMENDATIONS

5.1 Introduction

This chapter discusses the detail of the discussion based on the findings linked based on the seminal studies conducted in international, Asian, and local contexts. The first part of this chapter is a research summary, summary of the findings, and the second section of this chapter covers a discussion of the findings. The third part of this chapter covers implications and recommendations, including future study directions. A conclusion closes this chapter.

5.2 Research Summary

This study aimed to investigate emotional intelligence's effect on digital competency and organization readiness for change as a mediating factor in Sarawak Civil Service. In this study, five chapters cover vital elements in designing this study. Chapter one consists of an introduction, background of the study, problem statement, objective, research questions, research hypothesis, conceptual framework, the significance of the study, limitations, and definitions of terms. Each of these elements has its own significance in this study. The background of the study consists of a brief discussion of the background issues. Chapter two relates the issues and arguments from the previous study. Issues of this study are addressing on topics related which were with regards to emotional intelligence studies, organizational readiness for change studies, and digital competency studies. The next part of the study covered the theories that were engaged in this study which were relevant in explaining the study. In addition, the third part of chapter two explains the review of the previous study's findings, and the chapter ends with a short summary. Chapter three

discussed the methodologies used in this research. The aspects included research design, population and sample of the research, research instrument, pilot test, validity and reliability, data collection and data analysis procedures. It ended with a short summary. Data in this study were gathered through distributed questionnaires to Sarawak Civil Service, Sarawak. Descriptive statistics were used to explain the demographic background, and inferential statistics was used which covers structural equation modelling for model measurement, pathway analysis and regression analysis. Chapter four discussed the findings of the information from the distribution survey questionnaire. Data analyses were made based on the purpose of the study. This study described the respondent's demographic background based on gender, age group, education level and service period. Meanwhile, for model development, structural equation modelling was used to provide a robust test for model development; there are a few stages involved confirmatory factor analysis, measurement model, pathway analysis and regression analysis, which consisted of the identification of significant path and mediation test. Chapter five discussed the quantitative and qualitative findings concerning past research, the study's implications, recommendations, and overall conclusion.

5.2.1 Summary of the Findings

The purpose of this study is to critically examine whether there is any effect on emotional intelligence and the mediating effect of organizational readiness for change towards digital competency. The study intended to fill the gaps in the research on emotional intelligence and the mediating effect of organizational readiness for change towards digital competency. The specific objectives of the study are: -

1. To determine the effect of perception of emotion on digital competency.

2. To determine the effect of managing emotion in self on digital competency.
3. To determine the effect of social skills on digital competency.
4. To determine the effect of utilizing emotion on digital competency.
5. To determine the mediating effect of organizational readiness for change on emotional intelligence and digital competency.
6. To develop the best fit model of emotional intelligence on digital competency and organizational readiness for change mediating factor.

In tandem with the specific research objectives, the findings of the study revealed that:

1. Perception of emotion positively effects on digital competency.
2. Managing emotion in self positively effects on digital competency.
3. Social skills positively effect on digital competency.
4. Utilizing emotion positively effects on digital competency.
5. The role of organizational readiness for change on emotional intelligence and digital competency.
6. Fit model development for emotional intelligence on digital competency and organizational readiness for change mediating factor.

The structural model of the study was supported based on the analysis conducted; fit indices comprised of chi-square (1.842), Root mean square estimation approximate (RMSEA: 0.052), CFI (.916), TLI (.907), NFI (.835), IFI (.917), RFI (.817) and p-value (0.000). Emotions' perception positively affected digital competency with a β coefficient of 0.487, a p-value of 0.000, and a t-value of 5.386. Managing emotion also showed a positive effect on digital competency with a β coefficient of 0.489, a p-value of 0.000, and a t-value

of 5.784. The social skills domain positively affected digital competency with a β coefficient at 0.545, a p-value of 0.000, and a t-value of 5.998. Utilizing emotion showed there was a positive effect on digital competency with a β coefficient at 0.692, p-value at 0.000, and t-value at 5.427. For mediation test on organizational readiness for change as mediating factor of emotional intelligence and digital competency revealed that there was a partial mediation based on bootstrapping decision with the indirect effect = $0.896 \times 0.276 = 0.247296$, the direct effect = 0.579. Since from path emotional intelligence to organizational readiness for change is significant, and emotional intelligence to digital competency is also significant after the mediator enters the model. Therefore, the mediation test findings showed a partial mediation occurs.

5.3 Discussion

In this section, the discussion will be based on the specific objective of the study supported by the literature and previous studies related to this study. Six specific objectives were tested using different analyses, and the final part is developing a model based on selected variables.

5.3.1 The Effect of Perception of Emotion on Digital Competency

First specific research objective is to determine the effect of perception of emotion on digital competency. The basis of this objective is to examine the effect of perception of emotion on digital competency. The findings showed that there was a positive effect of perception of emotion on digital competency.

Perception of emotion is crucial for understanding other emotions and fostering social connections. Decoding information is the definition of emotion perception. It involves

recognizing information communicated by facial expressions, voice tone, gestures, body position, colour, and other indicators (Salovey & Mayer, 1990). The findings have proved there was a positive effect on the perception of emotion on digital competency. It is also aligned with Salovey and Mayer's (1990) study that revealed that perception of emotion affects social and competency. To support findings, another study was done by Kong, Bottom, and Konczak (2016) also indicated that there was a positive effect on the perception of emotion and competency. Kong, Bottom, and Konczak's (2016) study also stated that there was a connection between emotion perception and value-claiming performance in the contingent pay condition.

Perception of emotion is essential to describe individual emotion toward performance and competency. In the Malaysian context, consistent findings by Tharbe et al. (2021) stated that emotional intelligence abilities operate as a shield against the negative impacts of emotional stressors, allowing the person to deliver effective care while maintaining their psychological well-being and competency. Emotional intelligence is also essential to improve employee performance and corporate image in the long run. The correlation between employee emotional and social intelligence toward competency and performance can be found if employees manage to master individual emotional and social intelligence (Kearney et al., 2017).

Emotions are critical for employees to perceive positive emotions when coping with change and to explore new competencies. It is a proven fact that a vital factor in shaping positive emotion with desire competency to increase performance and strategic alignment. A previous study by Supramaniam and Singaravelloo (2021) established the perception of emotion as the primary domain for developing competency and increasing job performance. On top of that, perception of emotion also helps employees achieve satisfaction and job

success when a positive perception of emotion is perceived over the competency that is required to be developed. (Byron et al. 2007)

Developing new competencies in a digital environment is significant for every employee because employees are required to shift and gain new competencies (Supramaniam & Singaravelloo, 2021). Positive perception of emotion on digital competency also touches on other elements in emotional intelligence study. Thus, the effect of perception emotion can motivate the development of digital competency (Krishnakumar & Hopkins, 2014). This is important for individuals who work in the digital environment. Adverse effects on the perception of emotion will affect motivations for the employee to develop digital competency.

The sense of urgency relies on how employees perceive their perception of emotions toward new sets of competencies in the organization during the digital transformation journey. Negating the perception of emotion in measuring competency will result in the misalignment of human factors and required competency development within the organizational context (Tharbe et al., 2021). The findings showed that the positive effect of emotion perception would help employees develop digital competency and give a positive mindset to improve performance and success.

5.3.2 The Effect of Managing Emotion in self on Digital Competency

Second specific research objective is to determine how managing emotion in self affects digital competency. The basis of this objective is to examine the effect of managing emotion in self on digital competency. The findings showed that there was a positive effect of managing emotion in self on digital competency.

Managing emotion is the ability of an individual to manage and adapt to internal and external pressure such as stress. The significance of managing emotion in self is vital as the main factor that helps the employee to link with competency and performance of the individual (Schutte et al., 2009). The current study showed there was a positive effect of managing emotion in self on digital competency. Managing emotion in self is the domain of emotional intelligence responsible for an individual managing and reacting to the external environment or surroundings based on the level of coping and pressure the individual receives.

To put this in the context of the working environment, employees must have high social interaction, agility, and adaptivity when coping with changes and required competency. To support current findings, the study by Olson et al. (2019) also explained a difference in emotion management based on social interaction and psychodynamics. Olson et al. (2019) showed a statistically substantial discrepancy in the competency and performance outcomes towards emotion management. Thus, in this study, managing emotion in self is essential for employees and organizations to understand learning agility and adaptability towards digital competency.

In a dynamic environment, digital transformation is the key for an organization to sustain itself in the long run. Therefore, new sets of digital competencies are a priority and mandatory for organizations. However, from an employee perspective who are affected by this transformation initiative may have a different way of managing their emotion once they know that old competencies may not be relevant. It is about how employees manage emotion that comprises stress and pressure based on work demand. It is proven based on a Malaysian Study by Hatta, and Abdullah (2020) discovered that most workers experienced moderate

workplace stress, accompanied by solid job performance and emotional intelligence. It was shown that emotional intelligence factors significantly influenced the relationship between work stress and job performance and competence among respondents. Managing emotion is limited to taking off other feelings and controlling the critical situation in a social setting, but it is also significant to manage personal stress and reactivity toward specific issues, particularly issues regarding work or relationships.

According to Hede and Hede (2016), the dynamic of mindfulness in emotion management results in stress reduction and effective management of individual reactivity toward the perceived issue. Burnout and job discontent may more likely occur because of the emotional labour involved (Giorgi et al., 2020). Positive emotion management is vital to ensure the person can make a rational decision and develop positive intellectual. Positive emotion management is essential in aligning with digital competency because the most significant challenging task here is dealing with technical issues or troubleshooting that may influence competency and personal emotion.

Emotional intelligence is crucial to the management of positive emotion; particularly noteworthy is that burnout and job satisfaction are directly related to organizational outcomes, such as the desire to leave, absenteeism, work performance, and service quality. Sadovyy et al. (2021) study also mentioned that adverse organizational outcomes might have a detrimental effect on client services' quality, consistency, and stability and result in significant difficulties inside businesses due to poor employee emotional intelligence. The element of managing emotion in self in emotional intelligence plays an interface for the employee to represent organization performance.

The Sarawak civil service employees embrace digital transformation agenda with proper cascading information and training provided. Thus, Sarawak civil service managing emotion in self on digital competency is a positive effect, and this is due to the repercussion of critical initiatives by Sarawak civil service resulting in a positive effect on digital competency.

5.3.3 The Effect of Social Skills on Digital Competency

The third specific research objective is to determine the effect of social skills on digital competency. This objective's basis is to examine social skills' effect on digital competency. The findings showed that there was a positive effect of social skills on digital competency.

The process of gaining social skills requires several different components, including training, cognitive interference, and social interference. When it comes to both the social environment and the workplace, an individual's degree of success and overall performance can be directly correlated to their level of social competence (Cheung, Siu, & Brown, 2017). It is also referred to as “People skills” that correlate with social skills, performance, and leadership (Riggio & Reichard, 2008). The positive effect of social skills on digital competency showed that social skills act as a stimulus for an individual to interact system to develop digital competency. Boyatzis, Rochford, and Cavanagh (2017) mentioned that social skill is part of competency by developing a person's emotional intelligence. The individual requires interaction within the working environment by developing specific competencies. Mastering communication skills may not be sufficient. Thus, building positive rapport in gaining new competency sets and socializing ideas with others as part of transferring knowledge is critical. A positive effect of social skills on digital competency results in a high impact on individual and team performance in sustaining the knowledge in digital skills.

Social skills development is based on the environment exposed to the particular person. Emotional intelligence is not an aptitude, achievement, or personality but a corresponding cross-sectional section of emotional, social competencies, and skills (Karimzadeh, Goodarzi, & Rezaei, 2012). Social skill development is a survival tool for living in society, particularly at work (Supramaniam & Singaravelloo, 2021). An individual with high social skills most likely establishes good relationships and perceptions from others. In other words, acknowledgement from the social setting. Especially in the digital age where the acceptance rate of civil service employees and resistance to change is high. Individuals with high social skills play a role in interacting and bringing others to jump on the bandwagon and develop digital competency.

This is where individuals with high social skills increase team and organization performance by bringing others to develop new sets of competencies. Supramaniam and Singaravelloo (2021) also mentioned that social awareness as social skills in the context of emotional intelligence strongly influences competency and performance, demonstrating that individuals sympathize with the public's needs. Thus, a positive effect of social skills and digital competency is crucial as part of employee and organization need for digital transformation. Past study of social skills on competency shows that social skills are vital to determine the level of competency development in a specific ecosystem. Cheung, Siu, and Brown (2017) study revealed that individual competency develops based on sound social interaction to communicate the need to explore a new area in the digital environment. Individuals with high social skills will gain information on the use of digital tools and applications to develop specific competencies in the digital ecosystem. It is crucial to make sure that social skills positively affect digital competency. This is because the socializing idea, "People skills," conveying strategy in developing new competencies in the digital age

is always challenging for many organizations (Supramaniam & Singaravelloo, 2021). Its proven based on previous studies that social skills affect digital competency. Thus, the current study shows that social skills affect digital competency because operating in an organization ecosystem requires individuals, teams, and stakeholders to socialize their needs, people skills, development, and create positive emotions toward digital competency. Undeniably, some groups are not ready to develop digital competency due to uncertainty and readiness issues (Norshidah, 2011). Thus, investigating the effect of social skills on digital competency is a mandatory requirement for civil service to ensure social skills as part of the support system in developing digital competency.

5.3.4 The Effect of Utilizing Emotion on Digital Competency

The fourth specific research objective is to determine the effect of utilizing emotion on digital competency. The basis of this objective is to examine the effect of utilizing emotion on digital competency, and the findings showed that there was a positive effect of utilizing emotion on digital competency.

Employees with high emotional intelligence are more likely to be able to identify, control, and use their feelings to overcome challenges and advance their abilities and credentials (Trivellas, Gerogiannis & Svarna, 2013). The findings revealed that utilizing emotion has a positive effect on digital competency. Utilizing emotion is an indicator for individuals and a predictor for an individual to develop new sets of competencies, such as digital competency. This is due to how individuals use emotion in managing motivation on “why” he or she needs to develop new sets of competencies. Not only that, improving self-awareness of the need for new sets of competencies is vital for employees to position themselves in a dynamic digital ecosystem. Employees need to have positive emotions and

acceptance of new competencies. Thus, emotional stability, self-motivation, managing relationship, self-awareness, and integrity emerged as the best predictors of competency (Boyatzis, Rochford, & Cavanagh, 2017). Boyatzis, Rochford, and Cavanagh (2017) study revealed that utilizing emotion affects the competency and performance of an individual in a workplace setting. This is because of how one's individual use emotion to create a positive mood and change to positive emotion when new sets of competencies are required to perform the role or job. Individuals with high utilizing emotion may see digital competency as a new possibility to adapt and sustain their ability to perform better (Salovey & Mayer, 1990; Schutte et al., 2009).

On another note, a study by Al-Qadri and Zhao (2021) also supported current findings. It indicated that people with high interpersonal emotions tend to utilize their emotional intelligence in social interactions, pay attention to and understand others' feelings, process them well and translate positive emotion into performance. Al-Qadri and Zhao's (2021) study hypothesis developed on the effects of intrapersonal (perception of emotion) and interpersonal (utilizing emotion) on competency and performance. The findings showed a positive effect on utilizing emotion, competency, and performance. Thus, emotional intelligence is significant in evaluating employee competency. However, it is not easy to gain and maintain. Emotional intelligence can be trained to achieve social and emotional stability to improve individual performance and competency (Gruicic & Benton, 2015). An employee can apply their emotions to provide strategic ideas for their future, resulting in improved decision-making, critical thinking, and being more resilient in a challenging environment. Trivellas, Gerogiannis, and Svarna (2013) explained that firm members with extreme emotional intelligence experience continuous good mindsets, actuating more significant levels of fulfilment contrasted with those who think about such sentiments as

misery and frustration, neglecting to encounter a more elevated level of satisfaction. Along these lines, emotional intelligence workers are likelier to perceive, oversee, and utilize their feelings to rout difficulties and foster their abilities and capabilities. In the digital environment, employees often view digital competency as a burden for them to perform their specific roles in the organization. This is because organizations must shift from the traditional method and embrace digital transformation. From an employee perspective, utilizing emotion by managing self-motivation, perception, and interaction with the change is essential for them to cope with digital transformation. Therefore, the effect of utilizing emotion is vital to developing digital competency. Positive utilizing emotion helps individuals make decisions and maintain relationships by positively influencing others to see new possibilities in developing and adapting to the new sets of competencies required in a dynamic environment (Salovey & Mayer, 1990; Schutte et al., 2009).

5.3.5 The Mediating Effect of Organizational Readiness for Change on Emotional Intelligence and Digital Competency

The fifth specific research objective is to determine the mediating effect of organizational readiness for change on emotional intelligence and digital competency. In this discussion, the mediating effect of organizational readiness for change on emotional intelligence will be discussed first, followed by emotional intelligence and digital competency, concluding with the overall partial mediating effect.

The basis of this objective is to examine the mediating effect of organizational readiness for change on emotional intelligence and digital competency. The findings showed a partial mediating effect of organizational readiness for change on emotional intelligence and digital competency.

Organizational readiness for change plays a significant role in determining organization and employee readiness to embrace transformation initiatives. Emotional intelligence is critical in supporting changes and should be investigated to represent individual factors in the organizational context. At the same time, digital competency is the outcome of organizational readiness and emotional intelligence level. A study that was conducted by Norshidah (2011) found that emotional intelligence has a role in the readiness of organizations to adapt to change. Allaoui and Benmoussa (2020) supported that individual elements are more significant than other factors in boosting performance and regulating emotions. Emotional intelligence's impact on an individual's level of competency is another topic covered in Norshidah's (2011) study.

The influence of emotional intelligence on organizational readiness for changes revealed that emotional intelligence significantly contributed to the organizational readiness for change. Organizational readiness for change commitment to organizational readiness for change internal and external environment that covers technology, structure, strategies, directions, and leadership. Thus, examining the effects of emotional intelligence on digital competency is also essential as part of the primary model in the study. It is indisputable that human factors play a big part in the operation of the machine, as well as in the construction of the machine and the communication with the machine. Whereby in this context, digital competency is the essential component of the industrial revolution (Pereira & Romero, 2017).

Emotional and competency analysis is crucial for the business, and it is critical for those who work in human resources to have an understanding of current trends and situations in the market. This study demonstrated why having digital proficiency is essential in supporting the 4.0 revolution in the industrial sector. The shift toward a new phase of

development for industries is being referred to as the "industrial revolution 4.0." The ability of humans to generate goods is less critical in the Fourth Industrial Revolution. When the organization intends to shift organization is basically intended to transform business strategy that might affect people, processes, and competency (Allaoui & Benmoussa, 2020). It is fair to mention that the current findings aligned with previous studies and showed partial mediation between organizational readiness for change on emotional intelligence and digital competency. This is due to the nature of genuine concern and issues in many organizations.

The desire for businesses in the 21st century to be dynamic, flexible, and efficient has led to a considerable increase in the demand for digital tools. This increase can be attributed to the industrial requirement (Pereira & Romero, 2017). The attribute involved is organizational readiness for change, emotional intelligence, and digital competency. Organizational readiness for change is essential to shape individual emotions to perform in a digital environment. A study conducted in Greece by Vakola, Tsaousis, and Nikolaou (2004) supported the current findings by explaining that emotional intelligence has a role in how people respond to organizational change. Emotional intelligence is the driver of organizational changes that lead to employee perspective based on their experience, competency, and behaviour towards change initiatives implemented or recommended (Hallgrimsson, 2008).

On the other hand, organizational change will negatively impact emotional intelligence and competency development when the member of an organization has low emotional intelligence during the change process. This happens due to confusion, low motivation, and low performance (Norshidah, 2011). The organizational factors need to consider the preparedness of employees from the perspective of emotion and the

development of new competency (digital competency). In this context, organization factors are readiness to make a change, current structure, human capital, working tools, strategic enablers, policy, and technology.

Embracing change and developing new competencies in the digital era is always challenging for many organizations. Supramaniam and Singaravelloo (2021) stated that organizations that need to assess organizational readiness to change human factors such as emotional intelligence and require new development in this context are digital competencies. Another study that used organizational readiness for change as a mediator study in the Moroccan environment found that although there was a substantial positive influence on workers' attitudes toward change, individual characteristics were more relevant than other aspects (Allaoui & Benmoussa, 2020). Allaoui and Benmoussa (2020) highlighted that favourable emotional intelligence attitudes toward organisational transformation would contribute to the organization's success, increase employee well-being, and promote new competency development. It also shows how organizational readiness for change as a mediating factor complements emotional intelligence and competency. Emotional intelligence favours an organization's attitude toward change (Mukhtar & Fook, 2020). Therefore, the Emotional capacities of employees have been shown to significantly affect an organization's ability to change and hence positively influence competency and performance (Supramaniam & Singaravelloo, 2021).

Consistent findings by Rahiman et al. (2020) in the Bahrain context stated that emotional intelligence directly affects organizational commitment to embark on change. Lack of readiness for change management occurs due to information cascading and knowledge in managing change, particularly addressing employee competency. Some

employees who are experiencing organizational change need to upskill or update knowledge, skills, and outdated abilities and are not relevant to the current demand. The repercussion of a lack of organizational readiness for change can be found by Khan et al. (2021) in Malaysia, which demonstrated a lack of digital proficiency in the Malaysian environment. This is also compatible with Kassim et al. (2021) research in the Malaysian setting, which demonstrated a variation in the capacity to manage computers, networks, and hardware and a grasp of how to handle formal computer and network features. These gaps and concerns occur due to poor organizational readiness for change. The organization may be eager to embark on digital transformation agenda. However, the element of emotional and competency profiling is absent due to a lack of ecosystem assessment (Rahiman et al., 2020).

Organizational readiness for change is the critical mediating factor that affects emotional intelligence and digital competency. Primarily operating in digital environments that require competency, human interaction, and emotional changes.

5.3.6 Best Fits Model of Emotional Intelligence on Digital Competency and Organizational Readiness for Change as a Mediating Factor

Emotional intelligence is an input element in open system theory related to human resource capacity and behaviour. In this study, emotional intelligence is the process variable operationalizing the input element that interacts with the feedback, external environment, and organization activity. This study proved that the developed model is fit and based on the recommendation practices in academic settings internationally and locally. (Fan & Sivo, 2005; Hair et al., 2012; MacCallum & Hong, 1997; Sharma et al., 2005; West et al., 2017)

Interaction from Inputs (Emotional Intelligence) and Transformation elements (Organizational Readiness for Change) will result in output elements in the human result. In

this context, the human result is digital competency. Interaction between the input and transformation elements and external and internal environments will define the employee's digital competency level. This is potentially occurring due to the transformation element in this study addressing the organization's change readiness in overcoming the digital age and how employees perceived change initiative based on emotional intelligence self-profiling. The entire, complete cycle of open system theory can explain the complex integrated issues with integrated sub-model or theory in the study.

Pathway analysis in this study explores the strength of the effect and effect size of the mediation and tests the hypothesis testing using the structural equation modelling method through pathway analysis (Wang et al., 2016; Hair et al., 2012). Figure 5.0 showed pathway analysis of emotional intelligence, organizational readiness for change, and digital competency.

The pathway from emotional intelligence to organizational readiness for change with standard regression of 0.73 (moderate positive effect), S.E of 0.073, C.R of 12.237, and p-value at 0.000. Organizational readiness for change to digital competency with standard regression of 0.276 (weak positive effect), S.E of 0.078, C.R of 3.554, and p-value at 0.000. Meanwhile, a pathway from emotional intelligence to digital competency with standard regression of .579 (weak positive effect), S.E of 0.091, C.R 6.346, and p-value at 0.000. Structural model fit indices showed a fit model with a p-value of .000, RMSEA at 0.052, IFI at .917, CFI at .916, TLI at .907, NFI at .835, RFI at .817, and chi-square at 1.842. the cut-off figure was recommended by the previous scholars that adopted the structural equation modelling approach (Fan & Sivo, 2005; Hair et al., 2012; MacCallum & Hong, 1997; Sharma et al., 2005; West, 2017).

5.4 Implication of the Study

This study has five implications: theoretical implications, methodological implications, practical implications, the implication for organisation and implications for policymakers. Theoretical implication is explained on how model development in this study provides implications from the theoretical use or model used in human resource development and academic settings. Methodological implication explained the methodology adopted in this study, research philosophy, data collection, the procedure of analysis and testing of the hypothesis. On the other hand, practical implication explains how this study's contribution could impact practice in the field of human resource development that affect practitioner and employee. Implication for organizational explained how organisations use the information to align with critical strategic agendas and aspirations to plan organisational development and change management. Meanwhile, the implication for policymakers will explain how policy and statutory can be developed to enforce and strengthen the practicality, sustain and protect employees and organization from any internal or external issues related to image, performance and organizational well-being.

5.4.1 Theoretical Implication

Theory and model are significant to ensure any implication of the model development toward the field of study and the impact of the model or theory in the related field. Contribution on epistemology and reflection on ontological perspective is crucial to point out how much the impact and influence of the model developed in this study has.

Implication on the model development is essential because it provides a better insight into how emotional intelligence as an input works with organizational readiness for change as a mediator affecting digital competency. The impact of this study has shown that

emotional intelligence, organizational readiness for change and digital competency cannot be analysed only based on an individual model or theory; it must be an integrated model that can be tested and explained using an underlying theory or model. This study uses open system theory as its leading theory to explain the link with all the variables: emotional Intelligence, organizational readiness for change, and digital competency. The application of system theory is adopted due to the explicate dynamic relationship and interdependence between components of the system and the organisational environment relationship (Lai & Lin, 2017; Vaughn, 2018).

System theory is aimed at three levels of observation: the environment, the social organization as a system, and human participation. In Hayajneh's (2007) study, the open system theory interacts with the external environment with three essential foundations in system theory: input, transformation or process and output. Input in the organisation's context is raw resources that comprise human resource aspect, capital, and technology that is important to operate in an organisational setting. The

transformation domain interacts with internal and external environments and takes input as an incoming process that contributes to management activity, change initiative, and technological tools. The open system theory's output addresses the result of human competency and performance, financial results, and information.

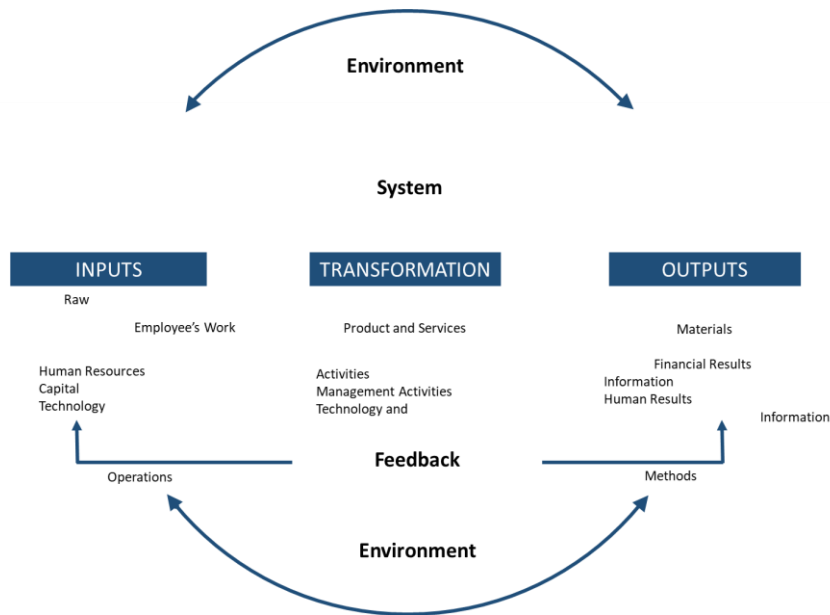


Figure 5.1: Open System Theory

Open system theory is widely used in many fields of study due to the theory's ability to anchor or encompass the system process (Juliet & Bassey, 2017). In the Human resource development field, an open system is viewed as the system that anchors the complete process of the internal and external environment that involves input, transformation, and output (Jacobs, 2014). Input element involves employee work such as employee motivation, attitude, emotions, competency, capital, and technological tools to perform work.

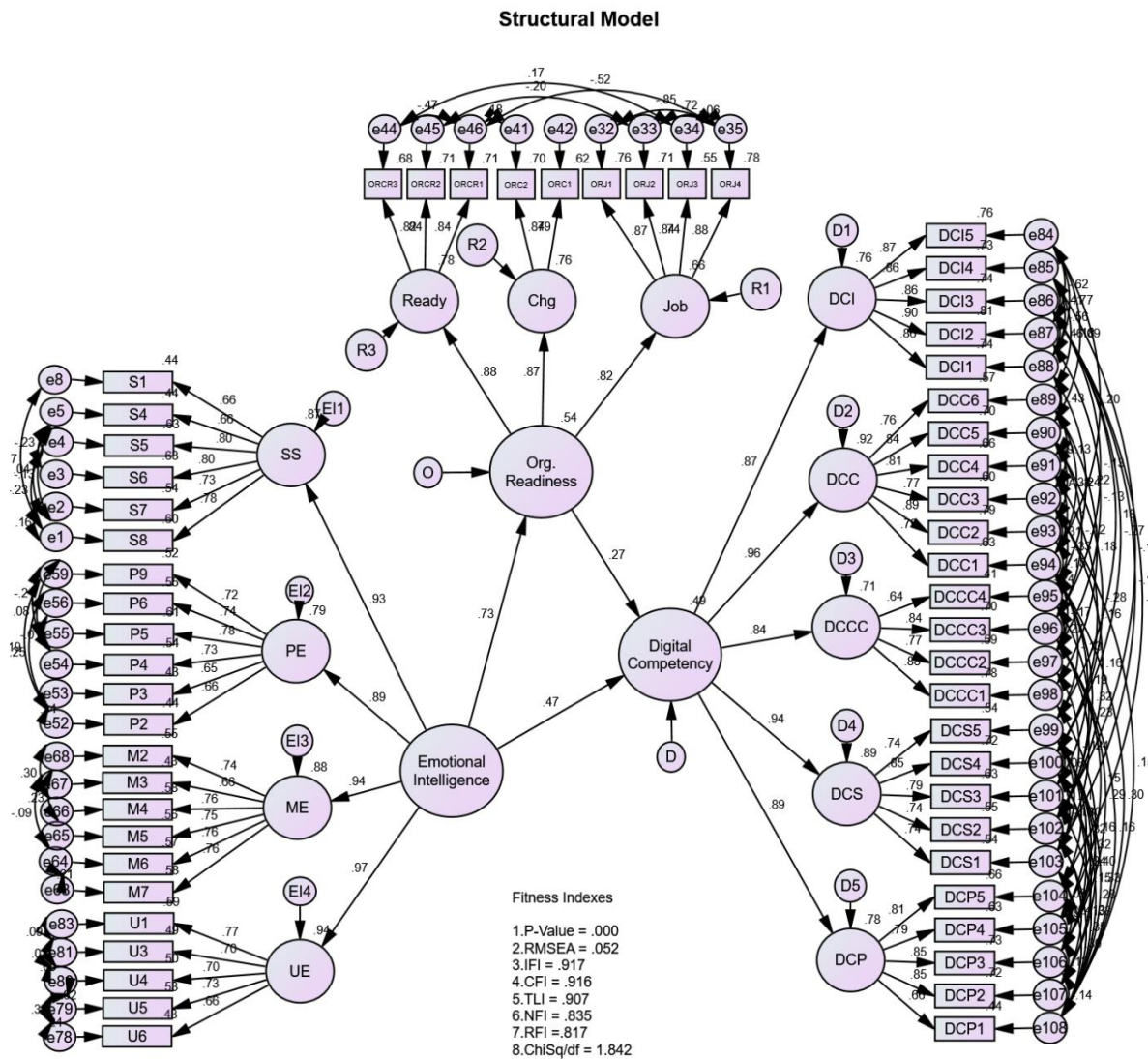


Figure 5.2: Structural Model of Emotional Intelligence, Organizational Readiness for Change and Digital Competency (EOC)

Figure 5.1 showed how the structural model of emotional intelligence, organizational readiness for change, and digital competency (EOC) in this study integrated and provided significant outcomes in the digital ecosystem. It has been proven that emotional intelligence, as an input of the open system theory, may influence the system's behaviour (Laszlo & Krippner, 1998; Jacobs, 2014; Vaughn, 2018). The justification here is that emotional

intelligence acts as vital input that influences the element in the system theory, which affects transformation and output in the open system theory. Previous studies by Vaughn (2018), Jacobs (2014) and Agazarian and Gantt (2004) have proven that the application of open system theory in emotional intelligence study provides a significant effect on the transformation and output element in the context of an organization. Sundarasaradula and Hasan (2014) stated that sustaining the internal environment and its interactions with the external ecosystem throughout the organizational change. Change management is described as the shift in information caused by needed service and maintenance operations, which is always positive owing to the nature of indirect costs, and as the change in entropy created by the input-transformation-output process, which may be positive or negative (Norshidah, 2011). Changes in performance and service delivery are possible within an organisation. Additionally, the organization is a system that contains input from an employee and any other resource. Transformation covers the activities that interact with the internal and external environment to define the service or goods offered to the end-users. At the same time, the output is the outcome of process interaction with input and transformation (McShane & Glinow, 2003; Weihrich et al., 2008; Norshidah, 2011; Sundarasaradula & Hasan, 2014; Chikere & Nwoka, 2014; Maes & Hootegeem, 2020). The interaction of the emotional intelligence model on organizational change and the digital competence model produces an output of emotional readiness, preparedness and competency development.

The EOC structural model provides significant implications in the academic setting, such as applying the integration model on emotional intelligence in human resources and contributing to the philosophy and epistemology. The current structural model can comprehend the current structure in the Malaysian context. The EOC structural model is the system that anchors the complete internal and external environment process involving input,

transformation, and output. Input element involves employee work such as employee motivation, attitude, emotions, competency, capital, and technological tools to perform work. The EOC structural model revealed that the management of change is a subsystem with a specific function within the organization, the same way that, for instance, the human resource system has its function. Due to the industrial shift, the ecosystem's increasing structural complexity could justify this insight. Vaughn (2018) stated that the live human systems (work teams, companies, and communities) that generate the circumstances for emotional intelligence at all system levels might then be understood and developed using a systems-centred model of emotional intelligence. Vaughn (2018) also applied open system theory as an underlying theory to explain the impact of emotional intelligence on executive coach performance in an organization setting. The employee is a crucial element of the system, and knowing how they react is essential for both successful development and the organisation's well-being. This study expands on previous models of emotional intelligence (Goleman, 1995), Organizational Change (Lewin, 1951) and Digital competence (Walker & White, 2015). All the domain in the study provide significant direct and indirect effect towards emotional intelligence organization readiness for change and digital competency . Previous models drive this study in order to expand current study model based on current situation that is happening in broad organizational setting. The implication of system theory, emotional intelligence model, organizational change model and digital competence is seen as a proven factors that affecting digital competency in the Malaysia context.

This study's EOC structural model implication provides significant implications and contributions to the industry, state, practitioners, and academia. The current model is based on the need for the industrial 4.0 revolution on human capital and competency (Pereira & Romero, 2017). Unlike theoretical gaps mentioned in chapter 1, the previous studies provide

the model that only assesses the internal factors that might be obsolete for today's industrial requirements, especially addressing industrial revolution 4.0. The current model closes the theoretical gaps by providing the integrated model that is not only limited to emotional intelligence but the other contributing factors, such as organizational readiness for change and digital competency, are incorporated into the model to suit current issues in human resource development and align with the industrial requirement. The philosophical value behind this model is the essence of knowledge in emotional intelligence, organizational change management and competency, practicality based on industrial need, and model insinuation. This study's philosophical value provides insight into emotional intelligence, organizational readiness, digital competency assessment knowledge, practicality and model profiling based on dynamic factors that disrupt the whole business in the organization. Using knowledge from the model can help to enhance the proper evaluation system that should be proposed and made in the future. Furthermore, it is also essential for future studies to develop another competency model that can be used to assess current competency needs based on the demand and current needs. The contribution of the knowledge in this study is the adoption of the knowledge based on the model and finding in this study that can be translated into practice in the organization. The knowledge contributes to understanding the issues of emotional intelligence, organizational readiness for change, and competency assessment based on the current situation. The adaptation of this knowledge benefits individuals, policymakers and organizations in order to understand "what matters" in today's practice, particularly in addressing the competency issue.

This study followed positivist philosophy by analysing emotional intelligence's effect on digital competency and organizational readiness for change as a mediator. A quantitative research methodology allowed the study to reach its research objective, and the

study adopted research questionnaires that the previous researcher developed. The model of the study was based on previous research and integrated with other theories and models.

The study applied structural equation modelling for exploring and confirming the intended model that is tested. The model was based on the hypothesis derived from related literature on emotional intelligence, digital competency, and organization readiness for change. By applying structural equation modelling, this study can test the model's fit, analyse the pathway and conduct a mediation test based on the study's objective. Due to the robustness of quantitative methodology, this study can answer the research objectives with a robust data collection procedure, data analysis and supporting literature to justify the methods and findings.

The application of the quantitative methodology in the study showed that the developed model provided significant implications in methodology, significantly triggering the use of the quantitative methodology in conducting research based on the EOC structural model presented in the study. Especially in Malaysia, the methodological implication at this juncture is the implication of replicating methodology for future research. By replicating this methodology, future research could have a basis and robust technique for addressing the concern based on the EOC structural model. It is also important to note that methodological implications will impact the practice of EOC profiling based on issues and organisational concerns that align with human resource development.

5.4.2 Practical Implication

The practical implications, on the other hand, address this study's impact on the practice of competency profiling in organizations. The implications here are improving the current profiling assessment based on the EOC structural model before actual profiling takes

place and honing practitioners' knowledge of the most eloquent or dynamic factors that act as underpinning factors for competency profiling. As far as this study is concerned, the result has confirmed that the most significant elements before conducting EOC profiling are emotional intelligence, digital competency, and organization readiness for change. This means that the mentioned elements above are necessary for the pre-assessment of EOC profiling. Therefore, this study could forecast the relevant positive implications such as improving the profiling process in the organizational setting, improving policy and related action plans regarding human resource practices mainly on competency and also could help local authorities to review this study as the necessary element in order to achieve high competency worker (high skilled worker).

In the context of Sarawak Civil Service, emotional intelligence is vital for a civil servant to develop emotional and social skills in adapting to vibrant geopolitics, government agenda, and challenges on the ground. Indeed, Sarawak is developing states that require high-skilled workers with exceptionally high skills in information technology (State Human Resource Unit, 2015). Thus, civil servants must master all aspects of delivering effective services to the "People". The core issues here are the readiness of civil servant to embark Digital economy Agenda. There are 47 Strategic Key Areas in Digital Economy that intertwine with the area that this study proposed to explore based on a deductive approach from a broader perspective and narrow down to the individual perspective related to human capital development. This is the biggest challenge for state government is to develop leaders that bring impact to society. Thus, this study model help Sarawak State Government perform EOC profiling based on the current industries such as digital competency, change management related to technological change and digital transformation. The main implication here is the contribution to the human resource and human development in terms

of EOC profiling domains that the industry needs based on the current need, which is “overcoming the industrial revolution 4.0” (Pereira & Romero, 2017). This is to answer the needs and challenge for state government is to develop leaders that bring impact to society. Bringing impact from a broader perspective means being competent technically and behaviorally (As cited in Tan Sri Datuk Amar Haji Morshidi Bin Abdul Ghani (State Human Resource Unit, 2015).

The current model might change how Sarawak State Government and the industry view EOC profiling and assessment based on the need of today’s market. This might also change the perspective or overview on competency in the 21st century, particularly aligned with the industrial 4.0 revolution. The current EOC model correlated to the agendas of the State Government of Sarawak, where the initiative is the digital economy, digital transformation plan, digital government, and digital competency. It will guide Sarawak State Government to perform digital competency based on its transformation agenda. Employees with high emotional intelligence demonstrated the highest levels of work performance and the fewest counterproductive work behaviours compared to those with low emotional intelligence who display high levels of workplace stress. Because emotional intelligence has been identified as an essential psychological variable in the workplace, it may play a part in the Covid-19 epidemic (Sadovyy et al., 2021). Concerning the worldwide research, Supramaniam and Singaravelloo's (2021) study in Malaysia indicated that the increased focus on digitization in the public sector necessitates effective and efficient public service delivery. As a result, public employees emotional intelligence plays a critical role in bolstering governmental organizations’ performance during such periods.

The study's sample uses the Sarawak Civil Service population, giving novel findings that can help organisations enforce rules and regulations on emotional intelligence, organization readiness and digital competency profiling. Policymakers require research related to human resource development to improve governance, policy and statutory. This will assist the government in ensuring the enforcement of statutory and policy compliance in practising emotional intelligence, organization readiness and digital competency profiling as part of development practice in civil service. The implication for policy making is an eye-opener for policymakers, employees and the organization related to providing essential intervention, training policy, organization development strategy and talent management. It must be guided by policy as a tool to ensure the study findings can be optimized and practised at the state level. As civil service faces a dynamic environment, a new form of policy is required to suit the need of the 21st century. Findings in the study give implications to the policy maker to synergize employee needs, organizational well-being and development.

5.5 Limitation of the Study

The first limitation of this study is only limited to the civil service context, which future studies could explore both from the private and public sectors. The current study is only limited to the context of civil service, nature of business, the interest of the state and addressing current issues. Potential new sectors contributing to human capital development is not covered this study and only limited to Sarawak Civil Service. The second limitation of the study is that only components related to emotional intelligence, organization readiness and digital competency are involved. This limitation is based on the past literature and current concern international and state-level. The current study only addresses emotional intelligence, organization readiness and digital competency as a basis to conduct research

that is aligned with the research objective and supported works of literature. The third limitation of the study was only the mono method, namely quantitative design, due to the study's time frame and responses from the organization.

5.6 Recommendation for Future Study

This study proposes that future research be in a mixed-method or triangulation design to understand the soliciting factors contributing to emotional intelligence, organizational readiness, and employee competency. By adopting a mixed-method or triangulation design, a researcher may develop the relevant model and understand the issue of emotional intelligence, organization readiness and competency in-depth. On top of that, this study also proposed a future study that includes non-technical competency as a dependent variable to measure employee competency effectively. Thus, the external factor should be considered in exploring the potential effect on emotional intelligence, organization readiness and digital competency. Future study is highly recommended to explore how an individual can improve digital competency, culture, change management and technological adoption. These elements are significant for individuals or employees to ensure that they can compete and, in their work, based on the need for today's job demand. This was mentioned by Pereira and Romero's (2017) study conducted in Spain about digital competency. Future studies need to consider viewing from the policymaker's lens. Policy related to emotional intelligence and human resource development should be aligned with the need for the new area of competencies requirement based on industrial needs. The policy should be based on the assessment of digital competency, digital leadership, change management, Internet of things evaluation and process competency. The old policy might be obsolete and may not be suitable for the current need to boost the organisation's performance. Finally, education

sector recommendations are to drill in the research on EOC profiling based on industrial 4.0, digital transformation, digital government, technological change, and digital leadership. Emotional intelligence, organization readiness and digital competency are necessary for every employee, organization and even management. Studies on emotional intelligence, organization readiness and digital competency require both insights from a mixed-method perspective or perhaps triangulation design to understand the underpinning concern and issues. Thus, future research may address this limitation for the purpose of research sustainability. Therefore, this study proposed a future study not only restricted to internal factors as contributing factors that may cover a broad spectrum of factors in the EOC model.

5.7 Conclusion

The main objective of the study is to provide deep understanding on the effect of emotional intelligence's effect on digital competency and organizational change readiness as mediating factors. This study offers solution for Sarawak Civil Service in developing leader that has an impact.

In a nutshell, this study indicated that all soliciting factors are vital to trigger employee emotional intelligence, competency, and organization readiness. There are six research objectives namely: the first is to determine the effect of perception of emotion on digital competency, second to determine the effect of managing emotion in self on digital competency, third to determine the effect of social skills on digital competency, fourth to determine the effect of utilizing emotion on digital competency, fifth to determine the mediating effect of organizational readiness for change on emotional intelligence and digital competency and the last objective is to develop the best fit model of emotional intelligence on digital competency and organizational readiness for change mediating factor. The finding

showed that the soliciting factors such as perception of emotion, managing emotion, utilizing emotion and social skills positively affect digital competency. As for the overall model, emotional intelligence and digital competency significantly positively affect organization readiness for change as a mediation factor. The result from the analysis is appropriately justified and explained in detail based on supported pieces of literature from previous studies. Organizational readiness for change is the most dynamic factor that can trigger the levels of emotional intelligence and employee competency. This study has shown that the related factors are vital to understanding concerns in Malaysia's emotional intelligence, digital competency, and organization readiness.

In conclusion, this study has offered robust literatures on emotional intelligence, digital competency, and organizational readiness models. Therefore, the findings were supported by seminal studies in the research area and aligned with the current issue in Sarawak Civil Service.

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APPENDICES

Appendix A: Journal Publications

1. **Nadri, A. H.,** & Hasbee, U. (2016). The impact of technological change as a mediator on employee competency profiling in selected industries in Kuching, Sarawak: A structural equation modelling approach. *Journal of Cognitive Sciences and Human Development. Vol, 1, 2.*
2. **Nadri, A. H.,** Hasbee, U., Mughal, Y. H., & Channa, M. A. (2016). Moderating effect of education levels on employee competency: Structural Equation Modeling Approach in the Malaysian context. *Science International, 28(5), 4731-4737.*
3. **Hasbee, U.,** Nadri, A. H., Ruer, D., & Mugha, Y. H. (2016). Informal Learning as A Stimulator to Enhance Employee Competency In The 21st Century. *Science International, 28(5),4739-4741.*
4. **Nadri, A. H.,** Gnanasageran, S., Superi, S., & Abd Latip, H.(2017). The Effectiveness of Balanced Scorecard Implementation In Sarawak Civil Service. *Science International, 29(5),1039-1041.*
5. **Nadri, A. H.,** Sopian, B., Diana, M., Norfarahzila, M. Z., & Estia, A. N. (2020). *City Council Organizational Profiling Insight and Learning Needs Assessment. Ministry of Public Health, Housing and Local Government. The Leadership Institute of Sarawak Civil Service.Sarawak, Malaysia.*
6. **Nadri, A. H.,** Sopian, B., & Diana, M. (2022). *Organizational Profiling Insight and Learning Needs Assessment. Ministry of Public Health, Housing and Local Government. The Leadership Institute of Sarawak Civil Service. Sarawak, Malaysia.*

7. **Sopian, B.,** Nadri, A. H., & Diana, M. (2023). Conceptual Framework on Emotional Intelligence, Digital Competency, And Organizational Readiness for Change. *Science International-Lahore*, 35(1), 51-56.
8. **Sopian, B.,** Nadri, A. H., & Hasriq, H. (2023). *Issues And Gaps in Emotional Intelligence Studies*. *Science International-Lahore*, 35(1), 39-44.

Appendix B: Turn It In Plagiarism Report

Turnitin Originality Report

Processed on: 25-Jan-2023 8:28 AM +08
ID: 1998794335
Word Count: 47159
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Phd Thesis By NADRI AETIS HEROMI BIN BASMAWI .

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[Submitted to Universiti Malaysia Sarawak on 2020-07-15](#)

<1% match (student papers from 10-Jun-2013)
[Submitted to Universiti Malaysia Sarawak on 2013-06-10](#)

<1% match (Internet from 20-Dec-2018)
<https://core.ac.uk/download/pdf/338499.pdf>

<1% match (Internet from 05-Jan-2023)
<https://core.ac.uk/download/pdf/81119249.pdf>

<1% match (Internet from 10-Oct-2022)
<https://core.ac.uk/download/pdf/82271019.pdf>

<1% match (Internet from 17-Oct-2022)
<https://core.ac.uk/download/pdf/159131321.pdf>

<1% match (Internet from 27-Nov-2022)
<https://core.ac.uk/download/pdf/327228788.pdf>

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Appendix C: Research Instrument



QUESTIONNAIRE

“The Effects of Emotional Intelligence on Digital Competency and Organizational Readiness for Change as a Mediating Factor in Sarawak Civil Service, Malaysia”

Dear Dato/Datin/Datu/Dr/Sir/Madam/Miss,

This survey aims to investigate **“The Effects of Emotional Intelligence on Digital Competency and Organizational Readiness for Change as a Mediating Factor in Sarawak Civil Service, Malaysia.”**

The information obtained from this survey will be kept confidential and solely used for academic purposes. This questionnaire consists of 4 Sections: Section A (Emotional Intelligence), Section B (Organizational Readiness for Change), Section C (Digital Competency), and Section D (Demography).

Please read the statements carefully before you answer them. You are required to answer ALL statements in the questionnaire. If there is any doubt, feel free to contact me. Thank you.

Nadri Aetis Heromi Bin Basmawi
Doctor of Philosophy
Faculty of Cognitive Sciences and Human Development
Universiti Malaysia Sarawak
94300 Kota Samarahan, Sarawak.
Email: n8ry_@hotmail.com
Phone number: 01129985082

Informed Consent Form

Faculty of Cognitive Sciences and Human Development
Universiti Malaysia Sarawak

Research Project:

“The Effects of Emotional Intelligence on Digital Competency and Organizational Readiness for Change as a Mediating Factor in Sarawak Civil Service, Malaysia”

Researcher’s Name: Nadri Aetis Heromi Bin Basmawi.

1. I understand that participation in this study is voluntary, the data provided will be treated with confidentiality, and I can withdraw at any time I wish
2. This survey may require less than 30 to 40 minutes to complete

Signature

Date

Please circle the number that best describe your degree of agreement on each statement

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

Section A: Emotional Intelligence

1.	I find it hard to understand the non-verbal messages of other people*	1	2	3	4	5
2.	I am aware of my emotions as I experience them	1	2	3	4	5
3.	I am aware of the non-verbal messages I send to others	1	2	3	4	5
4.	By looking at their facial expressions, I recognize the emotions people are experiencing	1	2	3	4	5
5.	I know why my emotions change	1	2	3	4	5
6.	I easily recognize my emotions as I experience them	1	2	3	4	5
7.	I am aware of the non-verbal messages other people send	1	2	3	4	5
8.	I know what other people are feeling just by looking at them	1	2	3	4	5
9.	I can tell how people are feeling by listening to the tone of their voice	1	2	3	4	5
10.	It is difficult for me to understand why people feel the way they do*	1	2	3	4	5
11.	I remember times I faced similar obstacles	1	2	3	4	5
12.	I expect that I will do well on most things I try	1	2	3	4	5
13.	I expect good things to happen	1	2	3	4	5
14.	When I experience a positive emotion, I know how to make it last	1	2	3	4	5
15.	I seek out activities that make me happy	1	2	3	4	5
16.	I have control over my emotions	1	2	3	4	5
17.	I motivate myself by imagining a good outcome to tasks I take on	1	2	3	4	5
18.	When I am faced with a challenge, I give up because I believe I will fail*	1	2	3	4	5
19.	I use good moods to help myself keep trying in the face of obstacles	1	2	3	4	5
20.	I know when to speak about my problems to others	1	2	3	4	5
21.	Other people find it easy to confide in me	1	2	3	4	5
22.	I like to share my emotions with others	1	2	3	4	5
23.	I arrange events others enjoy	1	2	3	4	5
24.	I present myself in a way that makes a good impression on others	1	2	3	4	5
25.	I compliment others when they have done something well	1	2	3	4	5
26.	When another person tells me about an important event in his or her life, I almost feel as though I have experienced this event myself	1	2	3	4	5
27.	I help other people feel better when they are down	1	2	3	4	5
28.	Some of the significant events of my life have led me to re-evaluate what is important and not important	1	2	3	4	5
29.	When my mood changes, I see new possibilities	1	2	3	4	5
30.	Emotions are one of the things that make my life worth living	1	2	3	4	5
31.	When I am in a positive mood, solving problems is easy for me	1	2	3	4	5
32.	When I am in a positive mood, I can come up with new ideas	1	2	3	4	5
33.	When I feel a change in emotions, I tend to come up with new ideas	1	2	3	4	5

Please circle the number that best describe your degree of agreement on each statement

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

Section B: Organizational Readiness for Change

1.	In my place of work, the moral is good	1	2	3	4	5
2.	I am satisfied with my colleagues	1	2	3	4	5
3.	I am satisfied with my supervisor	1	2	3	4	5
4.	I am satisfied with my job	1	2	3	4	5
5.	I am unhappy with my salary*	1	2	3	4	5
6.	In my place of work, people feel uncertain regarding the future	1	2	3	4	5
7.	I do not know what my job will be like in the future	1	2	3	4	5
8.	I feel uncertain when discussing the future with clients	1	2	3	4	5
9.	It is impossible to predict the result of the merger	1	2	3	4	5
10.	I feel like part of the family at my organization	1	2	3	4	5
11.	This organization has a great deal of personal meaning for me	1	2	3	4	5
12.	I feel optimistic that the proposed merger will be successful	1	2	3	4	5
13.	I will work hard to make the merger successful	1	2	3	4	5
14.	I look forward to being involved in changing the program or area	1	2	3	4	5
15.	I will resist any changes to the program or area in which I work	1	2	3	4	5

Section C: Digital Competency

1.	I can look for information online using a search engine.	1	2	3	4	5
2.	I can use different search engines to find information.	1	2	3	4	5
3.	I can use advanced search strategies to find reliable information on the internet, such as using web feeds	1	2	3	4	5
4.	I use some filters when searching the information	1	2	3	4	5
5.	I can assess the validity and credibility of information using a range of criteria.	1	2	3	4	5
6.	I can communicate with others using Skype or chat –using basic features (e.g. voice messaging, SMS, text exchange).	1	2	3	4	5
7.	I can use advanced features of several communication tools (e.g., Skype and sharing files).	1	2	3	4	5
8.	I actively use a wide range of communication tools (e-mail, chat, SMS, instant messaging, blogs, micro-blogs, social networks) for online communication.	1	2	3	4	5
9.	I can use collaboration tools and contribute to, e.g. shared documents/files someone else has created.	1	2	3	4	5
10.	I can create and manage content with collaboration tools (e.g. project management systems, online spreadsheets).	1	2	3	4	5
11.	I can use advanced features of communication tools (e.g. video conferencing, data sharing, application sharing).	1	2	3	4	5
12.	I can produce straightforward digital content (e.g. text, tables, images, audio files) in at least one format using digital tools.	1	2	3	4	5
13.	I can produce complex digital content in different formats (e.g. text, tables, images, audio files).	1	2	3	4	5
14.	I can make basic editing to content produced by others (e.g., adding and deleting).	1	2	3	4	5
15.	I know how to reuse content covered by copyright.	1	2	3	4	5
16.	I know the basics - principles- of one programming language.	1	2	3	4	5
17.	I can take basic steps to protect my devices (e.g. using anti-viruses and passwords).	1	2	3	4	5
18.	I know my credentials (username/password) can be stolen. I know I should not reveal private information online.	1	2	3	4	5
19.	I understand the health risks associated with the use of digital technology (e.g., risk of addiction).	1	2	3	4	5
20.	I take basic measures to save energy.	1	2	3	4	5
21.	I know how to react if my computer is infected by a virus.	1	2	3	4	5
22.	I find support when a technical problem occurs or when using a new program.	1	2	3	4	5
23.	I can use digital technologies to solve (non-technical) problems.	1	2	3	4	5
24.	I can solve technological problems by exploring the settings and options of programs or tools.	1	2	3	4	5
25.	I regularly update my digital skills.	1	2	3	4	5
26.	I am aware of new technological developments. I understand how new tools work.	1	2	3	4	5

Section D: Demographic Information

(Please tick / in the bracket or write in the space that applies to you.)

1. Gender:

Male ()
Female ()

2. Period of Service in Your Current Organization:

<1 year ()
1 year – 5 years ()
6 year – 10 years ()
>10 years ()

3. Grade

Grade 29 ()
Grade 32 ()
Grade 36 ()
Grade 41 ()
Grade 44 ()
Grade 48 ()
Grade 52 ()
Grade 54 ()

Others:..... (Please specify)

4. Highest Level of Academic Qualification:

Diploma/STPM ()
Degree ()
Master ()
PhD ()

Others:..... (Please specify)

Appendix D: Request and Approval Letter to Conduct Research and Data Collection

Fakulti Sains Kognitif dan Pembangunan Manusia
Faculty of Cognitive Sciences and Human Development

UNIMAS/NC-16.03/13-01 (32)

• 7 Februari 2022

Prof Datu Dr Sabariah binti Putit
Timbalan Setiausaha Kerajaan Negeri
Transformasi Prestasi dan Penyampaian Perkhidmatan
Tingkat 12, Wisma Bapa Malaysia, Petra Jaya
93502, Kuching, Sarawak

YBhg Prof Datu Dr Sabariah

Permohonan Kebenaran untuk Menjalankan Kajian dan Pengumpulan Data Berkaitan Penyelidikan bagi Pelajar Siswazah UNIMAS

Dengan hormatnya perkara di atas adalah dirujuk.

Adalah dimaklumkan bahawa pelajar yang tersebut di bawah merupakan pelajar Doktor Falsafah, Fakulti Sains Kognitif dan Pembangunan Manusia di Universiti Malaysia Sarawak yang perlu menjalankan penyelidikan sebagai syarat untuk bergraduasi. Pihak fakulti dengan ini, ingin memohon kebenaran pihak YBhg Prof Datu untuk membenarkan pelajar menjalankan kajian dan pengumpulan data berkaitan penyelidikan di organisasi YBhg Prof Datu.

Maklumat lanjut pelajar dan tajuk kajian adalah seperti berikut :-

Nama Pelajar	: Nadri Aetis Heromi bin Basmawi
No. Pelajar	: 18010152
No. Telefon	: 011 29985082
Tajuk Kajian	: <i>The Effects of Emotional Intelligence on Digital Competency and Organizational Readiness for Change as Mediating Factor in Sarawak Civil Service, Malaysia</i>
Nama Penyelia	: Prof Madya Dr Sopian bin Bujang
No. Telefon/Emel	: 017 9833031/ bsopian@unimas.my

Besarlah harapan kami kiranya pihak YBhg Prof Datu dapat memberikan kerjasama kepada pelajar ini untuk membolehkan pelajar mendapat maklumat yang diperlukan. Pihak Fakulti menjamin bahawa segala maklumat yang diperoleh hanya digunakan untuk tujuan akademik semata-mata dan dijamin akan kerahsiaannya.

Di atas kerjasama yang diberikan, kami dahului dengan ucapan ribuan terima kasih.

Sekian.

Yang benar



Profesor Madya Dr Zaiton Hassan
Penyelaras Program Siswazah
Fakulti Sains Kognitif dan Pembangunan Manusia
Universiti Malaysia Sarawak
Emel: hzaiton@unimas.my



UNIMAS/NC-16.03/13-01 (32)

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Di atas kerjasama yang diberikan, kami dahului dengan ucapan ribuan terima kasih.

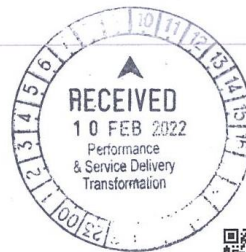
Sekian.

Yang benar

Zaiton

Profesor Madya Dr Zaiton Hassan
Penyelaras Program Siswazah
Fakulti Sains Kognitif dan Pembangunan Manusia
Universiti Malaysia Sarawak
Emel: hzaiton@unimas.my

MSC-Status





UNIT PERANCANG EKONOMI SARAWAK
ECONOMIC PLANNING UNIT SARAWAK

Jabatan Ketua Menteri
Chief Minister's Department
Tingkat 6, 7 & 9, Wisma Bapa Malaysia
6th, 7th & 9th Floor, Wisma Bapa Malaysia
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MALAYSIA

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Laman Web (Web) : <https://jkm.sarawak.gov.my>

Our Ref. : (34) JKM/SPU/608-8/2/1 Vol.3
Date : 24 February 2022

Mr. Nadri Aetis Heromi bin Basmawi
Leadership Institute of Sarawak Civil Service
KM20, Jalan Kuching – Serian,
Semenggok, 93250 Kuching,
Sarawak.

Dear Sir,

APPLICATION TO CONDUCT RESEARCH IN SARAWAK

I am pleased to inform you that approval is hereby given to enable you to conduct a research in Sarawak titled **‘The Effects of Emotional Intelligence on Digital Competency and Organizational Readiness for Change as Mediating Factor in Sarawak Civil Service, Malaysia’**.

This approval is subject to the following terms and conditions :-

- (i) The research will not involve any financial aid from the State Government of Sarawak;
- (ii) Your study should be limited to your research area;
- (iii) The Government has the right to withdraw this approval should you deviate from the original scope of your research; and
- (iv) Upon completion of your research, printed copies of the final report of your study written in the English Language are to be extended free to the Sarawak State Library (that is designated as the State Depository Centre) (1 copy); the Economic Planning Unit Sarawak (1 copy) and other departments/ agencies connected with your study at no cost.

Thank you.

“BERSATU BERUSAHA BERBAKTI”
“AN HONOUR TO SERVE”

(DATU DR. MUHAMMAD ABDULLAH BIN ZAIDEL)
Director
Economic Planning Unit Sarawak
For State Secretary Sarawak