



Faculty of Cognitive Sciences and Human Development

**THE RELATIONSHIP OF INTROVERSION AND EXTROVERSION ON SOCIAL
ADJUSTMENT AMONG UNDERGRADUATE STUDENTS IN UNIVERSITY**

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ABSTRACT

The Relationship of Introversion and Extroversion on Social Adjustment Among Undergraduate Students in University

This study examined the relationship between introversion, extroversion, and social adjustment among undergraduate students at the University of Technology Sarawak (UTS). Using a sample of 350 students and a questionnaire comprising the Introversion Scale by McCroskey and an adapted version of the Adjustment Inventory for School Students (AISS), data were collected online via Google Forms. Descriptive and inferential statistics, including One-Sample t-test, Pearson correlation, and Independent Samples t-test, were used for analysis. Findings revealed that students showed an above-average level of social adjustment. A significant negative relationship was found between introversion and social adjustment, while a significant but weak positive relationship was found between extroversion and social adjustment. Furthermore, extroverted students reported significantly higher levels of social adjustment compared to introverted students. These findings underscore the role of personality traits in influencing social adjustment within university settings and point to the importance of targeted interventions to support students with varying personality profiles.

Keywords: social adjustment, introversion, extroversion, undergraduate students, personality traits, higher education

ABSTRAK

Hubungan antara Introversi dan Ekstroversi terhadap Penyesuaian Sosial dalam Kalangan Pelajar Prasiswazah di Universiti

Kajian ini menjalankan siasatan terhadap hubungan antara introversi, ekstroversi dan penyesuaian sosial dalam kalangan pelajar prasiswazah di Universiti Teknologi Sarawak (UTS). Objektif utama kajian adalah untuk menilai tahap penyesuaian sosial pelajar secara keseluruhan, mengkaji hubungan antara introversi dan penyesuaian sosial, serta hubungan antara ekstroversi dan penyesuaian sosial, selain menentukan sama ada terdapat perbezaan yang signifikan dalam penyesuaian sosial antara kedua-dua ciri personaliti tersebut. Seramai 350 orang pelajar prasiswazah telah menyertai kajian ini melalui soal selidik atas talian menggunakan Google Forms. Instrumen kajian merangkumi Skala Introversi oleh McCroskey untuk menilai ciri personaliti serta versi yang diubah suai daripada Adjustment Inventory for School Students (AISS) bagi mengukur tahap penyesuaian sosial. Data telah dianalisis menggunakan statistik deskriptif, ujian-t sampel tunggal, ujian korelasi Pearson dan ujian-t sampel bebas. Hasil kajian menunjukkan bahawa pelajar memiliki tahap penyesuaian sosial yang berada di atas purata. Korelasi negatif yang signifikan ditemui antara introversi dan penyesuaian sosial, yang menunjukkan bahawa semakin tinggi tahap introversi, semakin rendah tahap penyesuaian sosial. Sebaliknya, ekstroversi menunjukkan hubungan positif yang signifikan dengan penyesuaian sosial, namun korelasi tersebut adalah lemah. Selain itu, terdapat perbezaan yang signifikan dalam penyesuaian sosial antara pelajar introvert dan ekstrovert, di mana pelajar ekstrovert melaporkan tahap penyesuaian sosial yang lebih tinggi. Penemuan ini menekankan kepentingan ciri personaliti dalam mempengaruhi penyesuaian sosial di institusi pengajian tinggi serta keperluan intervensi yang bersesuaian bagi menyokong pelajar dengan profil personaliti yang berbeza.

Kata kunci: penyesuaian sosial, introversi, ekstroversi, pelajar prasiswazah, ciri personaliti, pendidikan tinggi

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CHAPTER 1

INTRODUCTION

1.0 Introduction

The study examines the impact of two fundamental personality traits, introversion and extroversion on social adjustment among undergraduate students in a university setting. In this chapter, the researcher will discuss the background of the study, problem statement, study objectives, research questions, conceptual framework, theoretical framework, the definition of terms, and limitations in the study. Chapter 1 will explain this theme in more detail regarding the important components of the study.

1.1 Background of Study

Personality traits, specifically introversion and extroversion, play a significant role in shaping individuals' behavior, including how they adjust themselves socially in various environments (Belvis et. al., 2021). University is a dynamic environment where students of diverse personality traits interact, adapt, and navigate their social landscapes. Therefore, social adjustment is crucial as it directly impacts students' ability to engage with peers, faculty, and the broader university community, which influences academic success and overall well-being (Owusu-Agyeman & Mugume, 2023).

Introversion and extroversion are core elements of personality theory, most commonly understood within the Big Five Personality Traits framework (Chen et al., 2021). According to Petric (2022), Introverts are typically more reserved, less outgoing, and may prefer solitary activities or smaller social circles, often displaying a preference for introspection and thoughtfulness. In contrast, extroverts are more sociable, active, and thrive in environments that demand interaction and communication with others (Walker, 2022). These contrasting personality traits can affect how students adjust to university life, which often requires engagement in social activities, group work, and networking, making adaptability a key skill for success.

Social adjustment refers to the process of adapting to social roles and expectations in different environments (Pratiwi, 2020). For university students, the ability to adjust socially is essential for building relationships, developing interpersonal skills, and maintaining emotional

well-being. Extroverted students may find it easier to adapt to the demands of university life, engaging readily in social activities and group settings (Lun et al., 2020). In contrast, introverted students, who prefer less stimulating environments and smaller social interactions, may face greater challenges when adjusting to the socially dynamic nature of university life. These differences in personality traits can lead to variations in how students experience and manage the social aspects of their university education, ultimately influencing their overall university experience.

The tertiary education provides an ideal setting to study the relationship between personality traits and social adjustment with its diverse student body. The university environment offers numerous opportunities for social interaction, collaboration, and personal growth, but how students navigate these opportunities can vary widely depending on their personality traits (Smiderle et. al., 2020). This study aims to investigate how introversion and extroversion influence social adjustment, highlighting how these traits affect students' ability to integrate socially and succeed in university life. By exploring these relationships, the research will provide valuable insights that can help universities design support systems tailored to students with varying personality profiles, ensuring that all students are given the resources and assistance they need to thrive academically and socially.

1.2 Problem Statement

University life often presents social adjustment challenges for undergraduate students as they transition into a new academic and social environment. Social adjustment is essential for academic success, emotional well-being, and overall university satisfaction. Among the various factors influencing social adjustment, personality traits such as introversion and extraversion play a critical role in shaping how students interact with their peers, engage in group activities, and adapt to university life (Valenti & Faraci, 2021). While extraverted students tend to thrive in social settings, introverted students may face difficulties navigating large group dynamics and may prefer smaller, more intimate social environments.

Although numerous studies have examined the social adjustment of extraverted students, there is a significant gap in the literature regarding the unique challenges faced by introverted students. Few studies have specifically addressed how introversion impacts students' ability to integrate socially and perform in academic environments, especially in collectivist cultures like Malaysia, where group-based activities are highly valued. The influence of cultural contexts, particularly in Malaysian universities, has not been sufficiently explored (Coleman, 2022).

Additionally, introverted students' performance and social adjustment in collectivist countries, where collaboration and group dynamics dominate academic and extracurricular contexts, remain underexplored.

Moreover, the role of digital communication technologies, which may offer alternative avenues for introverted students to engage socially, has been largely overlooked (Alaskar, 2023). The rapid rise of digital platforms presents new opportunities and challenges for introverted students, yet there is little research on how these technologies might influence their social adjustment. Cain (2013) and Kuzeljevich (2017) agreed that identifying “introverted” and “extroverted” students is important for meeting their learning needs. While extroverted students have strong social skills that allow them to interact comfortably in different learning environments, introverted students tend to be more shy, quiet, and silent, thus, requiring more careful planning in classroom settings.

To address these gaps, this research aims to explore the impact of introversion and extraversion on the social adjustment of undergraduate students, focusing on their participation in group activities, interaction styles, and adaptation to university life in a collectivist culture.

1.3 Purpose of the Study

The main objective of this research project is to investigate the impact of introversion and extroversion on social adjustment among undergraduates at university. Specifically, the research aims to determine whether introverted students or extroverted students can adapt better to the university setting. By examining these connections, this study seeks to provide insights that can help university support systems, helping to tailor interventions.

1.4 Research Objectives

1. To investigate whether undergraduate students have a high level of social adjustment.
2. To investigate the relationship between introversion and social adjustment among undergraduate students.
3. To investigate the relationship between extroversion and social adjustment among undergraduate students.
4. To investigate the significant difference between introversion and extroversion on social adjustment among undergraduate students.

1.5 Research Questions

1. What are the levels of introversion and extroversion among undergraduate students based on the Introversion Scale by McCroskey?
2. What is the relationship between introversion and social adjustment among undergraduate students?
3. What is the relationship between extroversion and social adjustment among undergraduate students?
4. What is the significant difference between introversion and extroversion on social adjustment among undergraduate students?

1.6 Research Hypothesis

H₀ 1: The mean social adjustment score is less than or equal to 4, indicating moderate or lower social adjustment.

H₀ 2: There is no significant relationship between extroversion and social adjustment among undergraduate students.

H₀ 3: There is no significant relationship between social adjustment and introversion among undergraduate students.

H₀ 4: There is no significant difference in social adjustment between introversion and extroversion undergraduate students.

1.7 Theoretical Framework

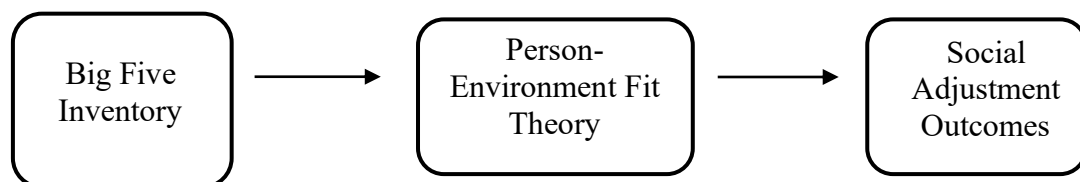


Figure 1.7 Theoretical Framework on the Relationship of Introversion and Extroversion on Social Adjustment

The theoretical framework of this study on the impact of introversion and extroversion on social adjustment among undergraduate students in university is grounded in two well-

established psychological theories: the Big Five Inventory and the Person-Environment Fit Theory. These theories provide a scientific basis for examining how personality traits affect students' ability to adjust socially within the university context.

The Big Five Inventory is a model used to describe human personality through five broad dimensions, 'OCEAN' which represent Openness, Conscientiousness, Extraversion, Agreeableness, and Neuroticism (Kang et al., 2024). In the context of this research, the focus is primarily on the dimension of Extraversion and Introversion. Extraversion encompasses qualities like sociability, assertiveness, and emotional expressiveness (Fong, 2020). Introversion, though not explicitly one of the five traits, is considered the lower spectrum of the Extraversion dimension. This model helps to categorize students according to their personality traits, which can influence how they interact in social settings, participate in group activities, and ultimately integrate into the university environment.

Person-Environment Fit Theory suggests that individuals experience greater satisfaction and are more effective when there is a good fit between their personal characteristics and the demands of the environment they are in (Kühner et al., 2024). Applying this theory to the university setting, the study examines how well students' introverted or extroverted traits align with the social demands and opportunities at university (Otero-López, 2021). Thus, this theory is particularly suitable for exploring how undergraduate students' personality traits impact their ability to thrive in a university environment that is socially demanding and diverse.

This theoretical framework shows that the Big Five Inventory can be used to classify students based on their personality traits, such as being introverted or extroverted. Once students are categorized, the Person-Environment Fit Theory can be used to assess whether their personality traits align with the demands of university life and how well they adjust socially. By examining this fit, we can understand the outcomes of students' social adjustment.

1.8 CONCEPTUAL FRAMEWORK

The conceptual framework for this research investigates the impact of introversion and extroversion on social adjustment among undergraduate students in university.

1.8.1 Conceptual Framework Diagram

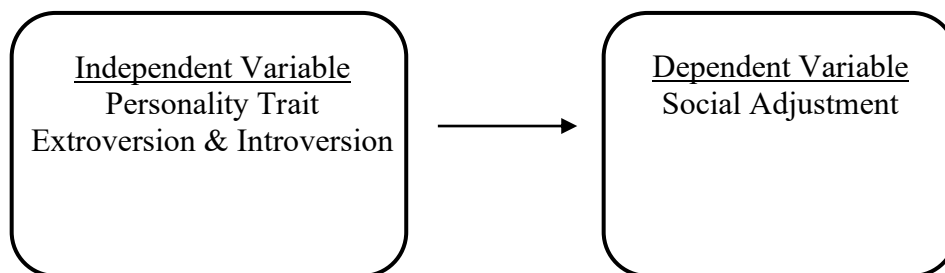


Figure 1.8.1 Conceptual Framework on the Relationship of Introversion and Extroversion on Social Adjustment

The conceptual framework of this study is designed to illustrate the relationships between personality traits specifically introversion and extroversion, and their impact on social adjustment among undergraduate students in university. At the core of this framework lies introversion, extroversion, and social adjustment, each playing a pivotal role in shaping students' social experiences within the university setting.

Under the independent variable, introversion is one of the key factors influencing social adaptability. Introverted students prefer solitude or small, close-knit social interactions, making it challenging for them to engage fully in environments that require frequent or large-scale social interactions, such as group discussions or networking events in the university setting (Tuovinen et. al., 2020). This can affect their ability to build social networks or participate in collaborative tasks, making their adjustment to social life in university potentially more difficult.

The independent variable, extroversion is represented as another key personality trait influencing social adaptability. Extroverts, who are typically more outgoing, enthusiastic, and comfortable in social settings, are likely to find it easier to engage with peers, participate in group activities, and form social connections (Itani et. al., 2020). This can enhance their ability to adjust to the social aspects of university life, as they are more likely to thrive in situations that require communication, collaboration, and interaction.

The dependent variable is social adaptability, the main outcome of interest in this study. Social adjustment refers to the degree to which students are able to effectively integrate into

the social fabric of the university, including forming new friendships, participating in social and academic activities, and generally feeling a part of the university community. The diagram shows that both introversion and extroversion feed into this outcome but in different ways. While extroverted students may have an easier time engaging in social activities that enhance their social adjustment, introverted students may face challenges that require different strategies to achieve a similar level of social integration.

In the diagram, the arrow is used to show how introversion and extroversion affect social adjustment. The arrow highlights introverted students, who usually prefer being alone or in small groups and might find it easier to adjust if they use digital tools for communication or stick to smaller group activities. On the other hand, extroverted students, who like being around people and are more outgoing, usually find it easier to fit in and make friends at university.

This framework highlights how introversion and extroversion affect social adjustment among university students. Extroverts may find it easier to connect with others and join group activities, while introverts might face challenges and benefit from smaller, supportive settings. By understanding these differences, the framework helps create strategies to support all students in building friendships and feeling part of the university community.

1.8.2 Key Concept

The key concepts in this study are introversion, extroversion, and social adjustment. Introversion and extroversion represent different ends of the personality spectrum, influencing how individuals interact socially and adjust to various environments.

1.8.3 Relationships Between Concepts

This section looks at how personality traits, especially introversion and extroversion, relate to social adjustment at university. Understanding these connections can help us see how students' traits impact their ability to adapt and succeed socially.

1.8.3.1 Introversion and Social Adjustment

Introverted students may experience challenges in social adjustment due to their preference for social activities and smaller social circles. This can lead to difficulties in engaging with peers, participating in group activities, and navigating the socially demanding aspects of university life (Liu & Csikzentmalyi, 2020). Their tendency to avoid large social gatherings may limit their opportunities for social interaction and integration, potentially affecting their overall university experience.

1.8.3.2 Extroversion and Social Adjustment

Extroverted students are likely to find social adjustment easier due to their natural inclination toward social interaction and their ability to thrive in dynamic environments. Their sociable nature facilitates the formation of friendships and connections, enabling them to participate actively in group work and social events (Sari & Arsyad, 2021). This positive engagement with their environment can enhance their overall university experience and social adjustment.

1.9 DEFINITION OF TERMS

This section provides detailed definitions of the key terms used in the study, both conceptually and operationally.

1.9.1 Introversion

1.9.1.1 Conceptual Definitions

Introversion is a personality trait characterized by a focus on internal feelings rather than external sources of stimulation (Herbert et al., 2023). Introverts often feel more comfortable in solitary activities or with small groups rather than large social gatherings.

1.9.1.2 Operational Definitions

In the context of this study, introversion is measured by the frequency and type of interactions with undergraduate students. It is quantified based on responses to specific items in the Introversion-Extroversion Scale by McCroskey (1997) that measures comfort level with solitude, preference for small group interactions, and avoidance of large social settings.

1.9.2 Extroversion

1.9.2.1 Conceptual Definitions

Extroversion is defined as a personality trait that is marked by an energetic approach towards social situations and interaction (Kwon & Choi, 2021). Extroverts are typically enthusiastic, talkative, and assertive in social settings (Davydenko et al., 2020).

1.9.2.2 Operational Definitions

For this research, extroversion is operationally defined by the degree to which undergraduate students engage in and seek out social interactions, including participation in group activities and events. This is assessed through their scores on the Extroversion scale of the Introversion-Extroversion Scale by McCroskey (1997), which reflects their frequency of social engagement and their expressed enjoyment of large social gatherings.

1.9.3 Social Adjustment

1.9.3.1 Conceptual Definitions

Social adjustment refers to the ability of an individual to conform to the social, behavioral, and interpersonal expectations of their environment (Talluri, 2023). It involves establishing satisfactory relationships within one's social context.

1.9.3.2 Operational Definitions

In this study, social adjustment is measured by how well students in university settings adapt to and integrate into the social aspects of university life. This includes their involvement in social activities, ease of making friends, and their overall sense of belonging. Data is collected through the Adjustment Inventory for School Students (AISS), which includes questions about their social activities, their feelings about these activities, and their perceptions of their social success at the university.

1.9.4 University

1.9.4.1 Conceptual Definition

A university is an institution of higher education and research that provides academic programs leading to degrees in various fields of study (Kumayas & Lengkoan, 2023). It serves as a center for knowledge creation, intellectual development, and skill enhancement, fostering critical thinking, innovation, and personal growth among students (Saroyan, 2022). Universities also contribute to society through research, community engagement, and the preparation of individuals for professional careers.

1.9.4.2 Operational Definitions

In this study, university refers to the University of Technology Sarawak (UTS) which serves as the setting for students' academic and social experiences. It encompasses various environments, such as classrooms, study areas, and social spaces, where students interact, learn, and engage with peers and faculty members as part of their educational journey.

1.9.5 Undergraduate Students

1.9.5.1 Conceptual Definitions

Undergraduate students are people working toward earning a bachelor's degree at a university or college. They usually follow a structured program that involves classes, hands-on experiences, and independent learning (Miller et al., 2023). This group includes students from various backgrounds and academic disciplines, from first-year students just starting their university journey to final-year students getting ready to graduate.

1.9.5.2 Operational Definitions

In this study, undergraduate students refers to students enrolled in a University of Technology Sarawak who are working towards completing their bachelor's degree and are the participants in research focused on personality traits and social adjustment.

1.9.6 Schools

1.9.6.1 Conceptual Definitions

"Schools" refer to the academic faculties or departments within a university that are responsible for delivering specific areas of study (Chigbu & Nekhwevha, 2022). Each school represents a particular field, such as business, engineering, computing, or social sciences. Schools within a university serve as administrative and academic units that organize teaching, research, and student support in their respective disciplines. They provide structured curricula and house the lecturers, academic staff, and resources necessary for delivering undergraduate programs.

1.9.6.2 Operational Definitions

For this study, "schools" refer specifically to the academic units or faculties at the University of Technology Sarawak (UTS) from which the undergraduate participants are enrolled. These include, the School of Computing and Creative Media, School of Engineering and Technology, School of Business and Management, and School of Built Environment. In the survey, participants were asked to identify their respective school as part of the demographic section.

1.10 Significance of Research

The study of the impact of introversion and extroversion on social adaptability among undergraduate students in university holds significant importance to university, undergraduate students, society, and the broader academic community.

1.10.1 Counselling Students

For students in the field of counseling, this research provides valuable knowledge about the challenges faced by individuals with different personality types in adjusting to university life. It equips future counselors with a deeper understanding of how introversion and extroversion influence social interactions, peer relationships, and emotional well-being. This understanding can help counseling students develop more effective interventions and support systems to assist their peers in overcoming social adjustment difficulties.

1.10.2 University

University plays a crucial role in shaping students' academic and social experiences. Understanding how introversion and extroversion affect social adjustment can help universities develop programs and policies that support students with different personality traits. By implementing strategies such as tailored orientation programs, peer support groups, and social engagement initiatives, universities can create a more inclusive and supportive environment for all students, ensuring their successful transition and adaptation to university life.

1.10.3 Academic Researchers

This study contributes to the existing body of knowledge on personality and social adjustment by providing empirical data on undergraduate students. Academic researchers can use the findings as a foundation for further studies on related topics, such as the impact of social adjustment on academic performance, mental health, and career development. The research can also serve as a reference for developing new theories and models on personality traits and social adaptation in higher education settings.

1.10.4 Society

On a larger scale, this research benefits society by shedding light on how different personality types function in social situations. This knowledge can help educators, employers,

and other community members create more supportive environments that cater to different social needs, leading to better integration and social harmony.

1.11 Limitations Of Research

1.11.1 Self-Report Biases

This study relies on self-reported data, where participants answer questions about their own personality traits and social adjustment. However, self-reported data can sometimes be inaccurate due to several reasons. Participants may not always be fully aware of their own behaviors or social experiences, leading to responses that do not truly reflect their actual social adjustment. Additionally, some individuals may provide answers that they believe are more socially acceptable rather than being completely honest. This is known as social desirability bias, which can impact the reliability of the data. Furthermore, mood, memory, and personal perception at the time of answering may also influence responses, leading to variations that do not fully capture long-term patterns of behavior.

1.11.2 Time Limit

One of the challenges faced in this research was the limited time available for data collection and analysis. Since the sample of students is from another district, reaching them for surveys and follow-ups was more difficult than if they were located nearby. This constraint may have affected the depth of data collection, as there was limited opportunity for repeated measurements or follow-up interviews to confirm responses. If the research had a longer duration, it might have allowed for a more thorough exploration of how extroversion and introversion influence social adjustment over time. Additionally, time constraints may have prevented the inclusion of a larger sample size, which could have strengthened the reliability of the findings.

1.11.3 Limit Generalizability

The study focuses specifically on undergraduate students from a single university, which may limit the generalizability of the findings. Social adjustment is influenced by various factors such as cultural background, university environment, and personal experiences. Since this research was conducted within a specific setting, the results may not apply to students in different universities, cities, or countries, who may experience social adjustment in unique

ways. Moreover, the study does not account for differences in academic programs, socioeconomic backgrounds, or other external influences that could shape social adjustment. Future research should consider including a more diverse group of students from different institutions to provide a broader understanding of the relationship between personality traits and social adjustment.

1.12 Summary

Chapter 1 provides an overview of the research exploring the impact of introversion and extroversion on social adjustment among undergraduate students in university. It introduces the concepts of introversion and extroversion within the framework of the Big Five personality traits and examines their influence on students' ability to adapt to the university environment, which is vital for their academic success and emotional well-being.

The theoretical groundwork for the study is laid by the Big Five Inventory and the Person-Environment Fit Theory. These models help assess how well students' personality traits align with the demands of the university setting. The research objectives focus on quantifying introversion and extroversion, assessing social adjustment with the Adjustment Inventory for School Students (AISS), and exploring the relationship between personality traits and social adjustment. Hypotheses are proposed to predict the effects of these traits on social adjustment, suggesting a positive correlation for extroversion and a negative correlation for introversion.

The study addresses gaps in existing research by focusing on the Malaysian university context, which has been underrepresented in global studies. This research could significantly contribute to enhancing student support systems by tailoring them to meet diverse personality needs, thereby improving students' university experiences. Ultimately, this chapter sets the stage for a comprehensive investigation into how personality influences student life at university, aiming to provide insights that could benefit educational strategies and student well-being.

CHAPTER 2

LITERATURE REVIEW

2.0 Introduction

This chapter reviews relevant literature on the concepts of social adjustment, introversion, and extroversion, particularly among undergraduate students. It aims to provide a theoretical and empirical background for the study by exploring how these personality traits relate to students' ability to adjust socially in a university setting. The review is structured to address the study's objectives, including examining levels of social adjustment, the individual relationships of introversion and extroversion with social adjustment, and the differences between these traits in influencing social adjustment. This foundation helps identify gaps in existing research and supports the need for the present study.

2.1 Concept of Social Adjustment

According to Kayani et. al. (2022), social adjustment refers to an individual's ability to adapt effectively to their social environment by managing interpersonal relationships, responding appropriately to social expectations, and maintaining a sense of belonging. For undergraduate students, social adjustment plays a vital role in their transition into university life, where they are expected to navigate new academic pressures, form social networks, and establish a sense of independence. A student's ability to adjust socially can significantly affect their academic performance, mental health, and overall university experience (Hassan et. al., 2023).

One of the key components of social adjustment in the university context is peer interaction. This involves the ability to form and maintain meaningful relationships with fellow students. Positive peer interactions can provide emotional support, enhance self-esteem, and reduce feelings of loneliness (Roshanaei et. al., 2024). Students who can engage easily with their peers are more likely to feel socially connected and comfortable in group settings such as classrooms, study groups, and social events.

Another crucial aspect is participation in social life. This refers to a student's involvement in campus activities, clubs, and social gatherings. Active participation helps students to integrate into the university community, develop interpersonal skills, and build a

network of support. Students who isolate themselves or avoid participation may face difficulties in forming social bonds, which can hinder their overall adjustment (Nazir & Özçiçek, 2023).

Communication skills also play a central role in social adjustment. This includes both verbal and non-verbal communication, as well as the ability to express thoughts, feelings, and needs clearly and confidently (Bukit et. al., 2023). Effective communication enables students to build relationships, resolve conflicts, and collaborate with others. Those who struggle with communication may find it challenging to participate in group discussions, approach faculty members, or seek help when needed.

An additional element is emotional adaptation, which involves managing emotions in social situations. Students must learn to regulate their responses to stress, criticism, and unfamiliar environments. According to Restrepo et. al. (2023), those who can manage their emotions effectively are better equipped to handle the social pressures of university life and are more resilient in the face of challenges.

Lastly, a strong sense of belonging is fundamental to social adjustment. This refers to the feeling of being accepted, valued, and included within the university community. Students who feel they belong are more likely to engage with others, participate in campus life, and perform well academically. In contrast, a lack of belonging can lead to withdrawal, anxiety, and decreased motivation.

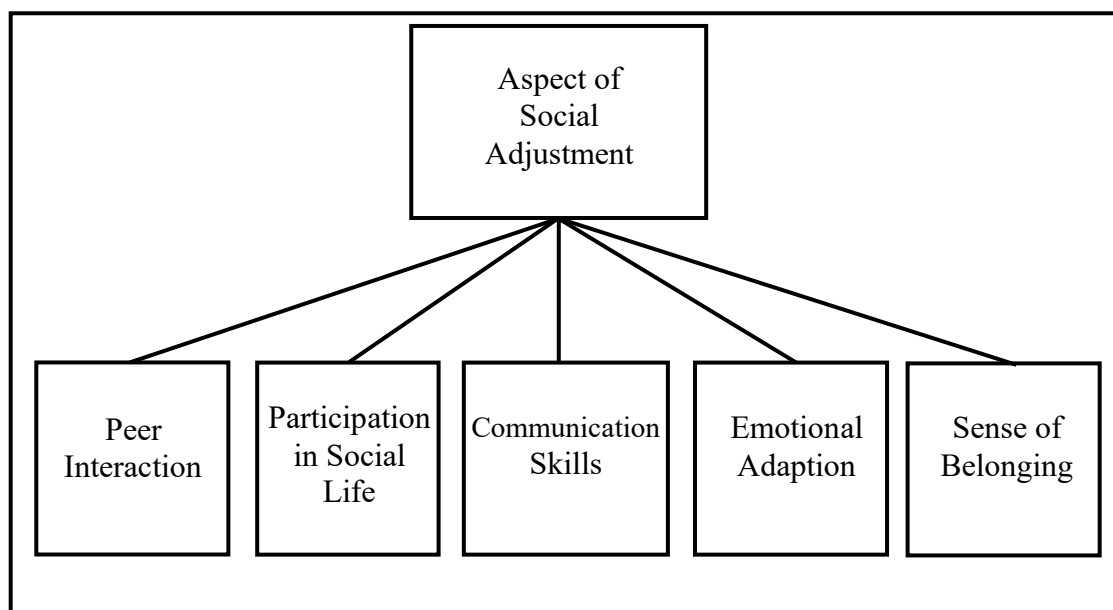


Figure 2.1: Key Aspects of Social Adjustment Among University Students

All these aspects are interconnected and collectively influence a student's overall level of social adjustment. These components provide a comprehensive understanding of how students adapt socially in a university setting. This understanding is particularly important when considering the influence of personality traits, such as introversion and extroversion, which will be explored in the following sections. Recognizing how these traits impact the core elements of social adjustment allows for a clearer investigation into the differences and relationships that exist among students with varying personality types.

2.2 Introversion

Introversion is a personality trait commonly associated with inward focus, quietness, and a preference for solitary or low-stimulation environments. Introverted individuals often gain energy from spending time alone and may feel mentally drained after extended social interaction. In the university context, introverted students tend to prefer independent learning, reflective thinking, and one-on-one or small-group interactions over large social gatherings or group-based activities.

Introverted students may appear reserved or quiet, especially in unfamiliar social environments. This does not indicate a lack of social skills but rather a different style of engagement. They may take more time to open up in social situations, preferring deeper, more meaningful connections over casual or spontaneous interactions. These students often find comfort in structured social settings where roles and expectations are clearly defined, such as seminars or mentorship programs.

Introverts possess unique strengths that make them stand out, particularly in tasks requiring independence and deep thought. They excel at working reflectively, often showcasing exceptional critical thinking skills due to their inclination for careful analysis and observation. Introverts are typically more deliberate and thoughtful, allowing them to approach problems with a nuanced perspective. Additionally, they tend to form meaningful and close-knit relationships within smaller social circles, which can lead to a deeper sense of connection and trust. As noted by Pratiwi (2020), these qualities can be invaluable in both academic and professional settings, as introverts are often reliable and attentive collaborators in the right environment.

Despite their strengths, introverts often face challenges in environments that prioritize extroverted behaviors, such as group projects, networking events, or large social gatherings.

These settings can feel overwhelming for introverts, who may naturally prefer solitude or smaller, less stimulating interactions. As Petric (2022) highlights, socially stressful situations can lead to heightened anxiety and feelings of loneliness among introverted students. The pressure to conform to extroverted norms may make it difficult for introverts to fully engage or feel comfortable in group activities, potentially hindering their social and academic growth.

To support introverted students, colleges and universities can implement strategies that acknowledge and accommodate their preferences. Research by Herbert et al. (2023) suggests that providing avenues for digital communication, such as online forums or virtual meetings, can help introverts express themselves more comfortably. Additionally, creating quiet and serene spaces on campus where students can retreat to recharge or focus can significantly enhance their sense of belonging and acceptance. Such initiatives not only support introverts but also foster an inclusive environment where all students, regardless of personality type, can thrive.

Understanding these characteristics and experiences is essential to this study, as introversion may significantly influence how students adjust socially in university. Recognizing both the strengths and struggles of introverted students provides insight into how their personality traits interact with the demands of social adjustment in a university setting.

2.3 Extroversion

Extroversion is a personality trait characterized by sociability, enthusiasm, and a high level of comfort in engaging with others. Extroverted individuals typically gain energy through social interaction and often seek environments that offer stimulation and connection. In the university setting, extroverted students are usually drawn to activities that involve teamwork, collaboration, and interpersonal communication.

Extroverted students often display high adaptability in university life, particularly in social and academic settings that require active participation and teamwork. According to Davydenko et al. (2020), extroverts thrive in group environments, naturally taking on leadership roles in group projects and collaborating effectively with others. Their ease in initiating conversations and navigating social situations enables them to form extensive social networks. These networks not only support emotional well-being but also provide academic and professional advantages, such as access to peer resources, mentorship, and future opportunities.

Additionally, extroverts tend to receive positive social feedback, which reinforces their behavior and builds confidence. Lun et al. (2020) argue that this feedback loop enhances their social adaptability, allowing them to adjust quickly to new environments and feel comfortable participating in a wide range of university activities. Extroverts are often highly visible on campus and tend to engage in student leadership roles, club activities, and campus events. Their involvement contributes to a stronger sense of belonging, which is a crucial factor in successful social adjustment.

However, despite these advantages, extroversion can present certain challenges. Chen et al. (2021) point out that extroverts may be prone to overcommitment due to their desire for social involvement. This can lead to physical and mental exhaustion, and in some cases, may result in neglecting academic responsibilities. Striking a balance between maintaining an active social life and focusing on academic obligations is essential for extroverted students to achieve overall success.

The cultural environment also plays a role in shaping how extroversion is expressed and received in university life. In the context of Malaysian universities, where group-based learning and communal activities are often emphasized, extroverts may find the environment particularly conducive to their strengths. Owusu-Agyeman and Mugume (2023) suggest that the social dynamics of Malaysian higher education tend to reward active participation and group engagement, allowing extroverts to integrate more naturally into campus life. This cultural alignment may enhance the extrovert's experience of social adjustment, giving them an additional advantage in adapting to university expectations.

In summary, extroverted students bring valuable interpersonal skills, confidence, and enthusiasm that can contribute significantly to their social adjustment in university. However, their tendency to prioritize social engagement must be managed carefully to avoid potential setbacks. Understanding how extroversion functions in both general and cultural contexts allows for a deeper examination of its role in shaping students' university experiences.

2.4 Personality Traits on Social Adjustment

Social adjustment is a critical factor in determining the academic and social success of university students. As students transition to university life, they are often required to adapt to new environments, establish relationships, and participate in various social and academic activities. Personality traits play a pivotal role in influencing how students navigate these

challenges, with particular focus on the dimensions of introversion and extroversion, as captured in the Big Five Personality Inventory.

The Big Five Inventory identifies five key personality traits: Openness, Conscientiousness, Extraversion, Agreeableness, and Neuroticism. These traits significantly influence social adjustment, particularly in a university setting where interpersonal interactions and adaptation to new environments are critical. Out of these, extraversion and introversion signify a dimension that captures how individuals interact with their social environment (Abdul Azis et al., 2024). Thus, this study will focus on the impacts of extroversion and introversion on social adjustment in university settings.

Extraverted individuals are characterized by sociability, assertiveness, and high energy levels. They thrive in social interactions and often excel in group settings due to their ability to network and connect quickly. Extroverts actively seek peer validation and feedback, boosting their confidence and enhancing their performance in collaborative tasks. Lun et al. (2020) highlighted that Malaysian extroverted students tend to show higher levels of engagement in group projects, often taking on leadership roles during college events. Their natural tendency to build relationships enables them to foster a sense of belonging within their academic community. Additionally, extroverts are more likely to participate in student organizations and extracurricular activities, further broadening their social networks and enhancing their university experience. In highly interactive classroom settings, extroverts often ask more questions and engage in discussions, strengthening their connections with peers and faculty.

In contrast, introverted individuals exhibit reserved and thoughtful behaviour. They gain energy from solitude and often avoid overstimulating environments (Hervert et al., 2023). Introverts excel in structured, low-pressure settings where interactions are personal and meaningful. Petric (2022) found that introverted students thrive in one-on-one mentorship sessions, where they can express their thoughts without the pressure of group dynamics. Introverts often approach problems with deep analysis and introspection, making them valuable contributors to tasks requiring focus and attention to detail. In group projects, introverts may take on roles involving planning, research, or creative problem-solving, ensuring the quality and depth of the work. They also tend to work best in quiet environments, such as libraries or study halls, where they can concentrate without distractions. While introverts may take longer to form connections, these relationships are often deeper and more supportive.

Both extraversion and introversion significantly impact university students' perceptions and reactions to their social environment. Extroverts often excel in group discussions, social events, and organizational activities, taking on leadership roles and promoting collaboration. A study by Davydenko et al. (2020) observed that extroverted students participating in public speaking workshops not only performed well but also encouraged others to join, fostering a collaborative environment. Meanwhile, introverts thrive in environments that prioritize individual problem-solving or creativity. Pratiwi (2020) also described how an introverted student excelled in a case study competition by focusing on analytical and design aspects, leaving presentations to extroverted teammates.

The interplay of these traits in social settings reveals the importance of balance. Groups that include both introverts and extroverts tend to perform better, as each trait complements the other. Extroverts bring energy, collaboration, and leadership to the group, while introverts contribute concentration, critical thinking, and precision. A study by Chen et al. (2021) noted that such synergy is particularly evident in group projects, where extroverted members lead discussions and boost morale, while introverted members ensure thorough and precise completion of assignments. This balance allows groups to leverage the strengths of both personality types, fostering an environment where diverse contributions are valued and appreciated.

2.5 The Relationship between Personality Traits and Social Adjustment

Social adjustment refers to an individual's ability to interact harmoniously with their social environment. For university students, this includes adapting to academic demands, peer relationships, extracurricular participation, and institutional culture. Personality traits such as introversion and extroversion significantly influence how students navigate these social aspects of university life. This section reviews studies that explore the relationship between personality and social adjustment among students, with particular emphasis on the Malaysian context.

2.5.1 The Relationship between Introversion and Social Adjustment

Introversion has historically been associated with social withdrawal or difficulty in making interpersonal connections. However, several recent studies have challenged this stereotype by highlighting the positive characteristics of introverts, especially when social environments are supportive and non-threatening. Yap conducted a study in 2018 that examined the relationship between introversion, shyness, and loneliness among Malaysian

college students. Using the Introversion Scale, the UCLA Loneliness Scale, and the Cheek and Buss Shyness Scale, data were collected from 110 students. The results revealed that introversion was negatively correlated with loneliness and shyness. Specifically, the correlation between introversion and loneliness was measured at negative 0.296 with a significance value less than 0.02, while the correlation between introversion and shyness was negative 0.342 with a significance level of 0.00. These findings contradict the common assumption that introverts are more prone to isolation or emotional detachment. Instead, they suggest that introverted students may experience less loneliness and shyness when placed in an accommodating environment.

This insight is particularly relevant in the Malaysian context where communal values and interpersonal harmony are emphasized. Yap's findings suggest that introversion does not inherently hinder social connection but may instead reflect a preference for depth over breadth in relationships. Malaysian universities, with their collectivist culture, may offer introverted students opportunities to engage meaningfully in close-knit peer groups, allowing for deeper interpersonal bonds rather than constant outward engagement.

Tuovinen et. al. in 2020 explored how introverted students relate to social engagement and self-esteem. Conducted in Finland with 862 ninth-grade students, the study found that introverted individuals who actively engaged in structured social environments experienced higher self-esteem than those who remained socially disengaged. The study employed a two-factor model to measure both engagement and disengagement. Despite cultural differences between Finland and Malaysia, the underlying principle remains valuable: social engagement, when aligned with a student's comfort level, enhances emotional and psychological well-being. The implications for Malaysian universities are clear. Providing low-pressure social environments where introverts can gradually participate helps foster better adjustment outcomes.

Adding to the local relevance, Ghazali and Nor in 2017 developed the Introvert and Extrovert Personality Inventory, also known as IPEI. Their aim was to create a culturally sensitive tool to assess personality traits among Malaysian university students. The 30-item inventory underwent expert content validation and reliability testing with a sample of 40 students from Perak. The inventory demonstrated strong internal consistency with a Cronbach's alpha of 0.80 for introversion and 0.73 for extroversion. It also achieved a high content validity rating of 87.8%. By aligning with Malaysia's cultural values and social norms,

the IPEI provides a reliable and appropriate measurement of personality traits in a university setting. This tool is critical for understanding how students with varying personality profiles experience and respond to social adjustment demands.

Overall, these studies demonstrate that introversion is not a barrier to successful social adjustment. Rather, the key factor is whether the social environment allows introverted students to participate in ways that align with their comfort and strengths. Supportive measures such as smaller group interactions, online discussion forums, and quiet campus spaces can empower introverted students to engage socially without overwhelming pressure.

2.5.2 The Relationship between Extroversion and Social Adjustment

Extroverted students tend to show strong adaptability in university life due to their natural sociability, confidence, and enthusiasm for collaboration. Research by Davydenko and colleagues in 2020 highlights how extroverts often take leadership roles in group projects and perform well in collaborative tasks. Their ability to communicate effectively and form quick connections enhances both their academic and social experiences. These students are often seen as proactive, visible, and influential members of the university community.

Further supporting these findings, Lun et al. in 2020 emphasized that extroverted students receive frequent positive social feedback, which strengthens their self-confidence and reinforces active participation. This creates a beneficial cycle where extroverts continue engaging with peers, faculty, and extracurricular activities, thereby improving their sense of belonging and overall social adjustment. Their willingness to initiate conversations, attend events, and participate in student organizations makes them more likely to integrate quickly into university culture.

Despite these advantages, extroversion may also present certain challenges. Chen et al. in 2021 pointed out that extroverted individuals sometimes overcommit to social activities, which can lead to exhaustion, reduced academic performance, and emotional burnout. Extroverts may struggle to strike a balance between maintaining their active social lives and focusing on academic responsibilities. This highlights the need for self-regulation and institutional support that promotes healthy routines and workload management.

In the Malaysian context, extroversion aligns well with the prevailing cultural and institutional dynamics. Owusu-Agyeman and Mugume in 2023 discussed how Malaysian

universities often emphasize group work, community involvement, and collective achievements. These environments are conducive to extroverted traits, making it easier for extroverted students to engage and thrive. Their natural alignment with the university's social structure further supports positive outcomes in terms of adjustment, achievement, and participation.

Together, these studies suggest that while extroverted students often adjust easily due to their active engagement, they also benefit from guidance on time management and self-care. Creating awareness of the need for balance can prevent burnout and promote sustained academic and social success.

2.5.3 Summary of Key Findings

The reviewed studies provide diverse perspectives on introversion, extroversion, and social adjustment. Yap (2018) challenges the conventional view that introversion is synonymous with loneliness and shyness, emphasizing the need to distinguish these traits in psychological assessments. In contrast, Tuovinen et al. (2020) highlight the potential for introverted individuals to thrive socially, particularly when supported by structured engagement opportunities. While Yap's study focuses on Malaysian college students, Tuovinen's research broadens the scope by examining younger students in Finland, offering cross-cultural insights. Ghazali and Nor (2017) contribute by addressing the methodological gap, developing a culturally sensitive inventory to assess personality traits, which aligns closely with Malaysia's collectivist cultural context.

Each study offers valuable contributions but is not without limitations. Yap (2018) benefits from its focus on Malaysian students, providing context-specific findings, but its sample size of 110 participants may limit generalizability. Tuovinen et al. (2020) employs a robust sample and methodology, offering significant insights into social engagement and self-esteem. However, the Finnish cultural context differs from Malaysia's, potentially affecting the applicability of its conclusions. Ghazali and Nor (2017) address a critical gap by developing the IPEI, yet their reliance on a small sample for validation calls for further large-scale studies to confirm the tool's reliability and validity across diverse populations.

Collectively, these studies underscore the need for nuanced approaches to understanding and supporting introverted students in Malaysian universities. The findings from Yap (2018) and Tuovinen et al. (2020) suggest that introversion does not inherently impede

social adjustment but rather highlights the importance of context and support systems. Ghazali and Nor's (2017) work further reinforces the need for culturally sensitive assessment tools to accurately evaluate personality traits within Malaysia's collectivist culture.

Building on these studies, the current research aims to explore the influence of introversion and extroversion on social adjustment among Malaysian university students. By incorporating the IPEI for personality assessment and considering factors such as cultural norms and institutional practices, this study seeks to provide a comprehensive understanding of how personality traits interact with social and academic environments. Additionally, it aims to identify strategies to create inclusive and supportive settings that accommodate diverse personality types, ultimately contributing to improved social adjustment and academic success.

To consolidate the insights from these studies, the table below presents a comparative overview of the research findings and their relevance to the current study.

Table 2.5.3: Summary of Studies on Introversion, Extroversion, and Social Adjustment

Study	Key Findings	Relevance to Current Study
Yap (2018)	Introversion negatively associated with loneliness and shyness	Highlights that introversion does not equal social disengagement
Tuovinen et al. (2020)	Socially active introverts had higher self-esteem	Encourages structured engagement opportunities for introverted students
Ghazali and Nor (2017)	Created reliable and culturally valid inventory for personality assessment	Supports use of culturally relevant tools in personality research

Davydenko et al. (2020)	Extroverts excel in group collaboration and leadership roles	Demonstrates academic and social strengths of extroverted students
Lun et al. (2020)	Positive feedback enhances extroverts' confidence and adaptability	Reinforces extroverts' visibility and integration in campus culture
Chen et al. (2021)	Excessive social involvement can lead to burnout and academic neglect	Highlights need for support in managing extroverted students' balance
Owusu-Agyeman and Mugume (2023)	Malaysian universities favor extroverted social behaviors	Confirms alignment of extroversion with local academic settings

These findings collectively emphasize that both introversion and extroversion contribute to social adjustment in different but equally important ways. Introverted students may thrive in settings that offer meaningful, low-pressure interactions and individualized support, while extroverted students flourish through participation and leadership in socially vibrant environments. Understanding these distinctions allows institutions to design inclusive strategies that accommodate the full range of personality traits. In doing so, universities can ensure that all students are supported in their journey toward social and academic integration.

2.6 Comparative Studies on Introversion, Extroversion on Social Adjustment

A significant body of research has explored how introversion and extroversion differentially influence social adjustment, especially in educational contexts such as universities. Numerous comparative studies have found that extroverts generally report higher levels of social adjustment, engagement, and overall satisfaction in social settings compared to their introverted peers. However, other studies highlight complexities and suggest that the differences may depend on situational, cultural, and developmental factors.

Sourabh Sharma and Ramesh Behl (2022) conducted a comparative study to examine how social media influences the academic performance of students with different personality types, specifically extraversion and introversion. With the increasing integration of technology in education, the study aimed to identify key social media factors affecting students' academic outcomes. The research involved the development and validation of a measurement scale tailored to the Indian educational context. A total of 408 students participated in the study, comprising 202 males and 206 females, with 234 enrolled in postgraduate programs and 174 in undergraduate courses. Using one-way ANOVA, the researchers compared the perceived impact of social media across personality types, educational levels, and gender. The findings revealed a statistically significant difference between extraverted and introverted students in terms of how social media affected their academic performance. This suggests that personality traits, particularly extraversion and introversion, may play a crucial role in shaping how students engage with and are influenced by social media in academic contexts.

Another study by Holliman et. al. (2022) examined the relationships between adaptability, personality traits, social support, and psychological wellbeing among first-year Chinese boarding high school students. Given that the transition to boarding school represents a significant adjustment period, the study explored how adaptability, defined as the ability to adjust to change, affects students' mental health outcomes. The researchers surveyed 102 students, assessing their personality traits, perceived social support, adaptability, and psychological wellbeing, which included measures of life satisfaction, mental wellbeing, and psychological distress. The results indicated that adaptability, along with neuroticism, extraversion, and social support, independently predicted psychological wellbeing. Furthermore, adaptability fully mediated the relationship between conscientiousness and neuroticism with wellbeing, and partially mediated the effects of extraversion and social support. These findings highlight the central role of adaptability in promoting student wellbeing and suggest that personality traits and social support contribute both directly and indirectly through adaptability. The study offers valuable insights into the psychological adjustment of students in non-Western contexts and underscores the importance of developing adaptive skills to support wellbeing during educational transitions.

However, not all studies uniformly support the idea that extroverts are always better adjusted. Wang and Sheibani (2024) investigated the nuanced relationship between personality traits and social adjustment among college students. Their study revealed that extroverted

students tend to exhibit higher levels of social adjustment and life satisfaction in the early stages of college life. However, the findings also suggest that introverted individuals may gradually form more meaningful and deeper interpersonal connections over time, potentially leading to improved social adjustment in the long term. This research highlights the evolving nature of social integration in relation to personality traits and suggests that both extroverts and introverts adapt to college life in distinct yet valuable ways.

Taken together, these studies highlight both consistent patterns and contextual nuances in the relationship between personality traits and social adjustment. While extroverts tend to adjust more easily and visibly due to their social nature, introverts are not inherently maladjusted. Rather, they may require different types of environments or support systems to thrive socially. The degree of difference in social adjustment outcomes between the two personality types may also depend on factors such as cultural context, gender, academic pressure, and institutional support.

The current study seeks to build on this comparative literature by examining these dynamics specifically among undergraduate students within a university setting. It aims to determine whether a statistically significant difference exists between introverted and extroverted students in terms of social adjustment and to explore the possible reasons for any disparities found.

2.7 Theories Applied to Research

This section discusses the theoretical frameworks of the Big Five Inventory and the Person-Environment Fit Theory, examining how they apply to social adjustment in university students. It highlights how these theories help understand the impact of personality traits, especially extroversion and introversion on students' behaviour, social interactions, and adaptability to different academic and cultural environments.

2.7.1 Big Five Inventory

This framework identifies personality qualities and shows how extraversion and introversion affect people's behaviours. It provides a scientific basis for studying the relationship between these traits and social adjustment (Abdul Azis et al., 2024). This theory is particularly appropriate because it enables the categorisation of personality traits in broad

dimensions that can be related directly to the way students cope with social demands at university.

In a study, Otero-López et al. (2021) used the Big Five Inventory in a study to find out how personality traits influence university students' coping mechanisms and compulsive buying behaviour among Spanish university students. The researchers have focused on the dimensions of Big Five traits, especially extroversion and introversion and their implications on the students' social interactions and decision-making. This is evident with the extroverted students as they are more likely to engage in group activities that foster social interactions, while the introverted students would rather spend time solving problems on their own.

Additionally, this example of a study by Otero-López et al. (2021) is appropriate because it clearly illustrates exactly how the Big Five Inventory can be helpful in identifying different personality types for their behavioural patterns. In the context of social adjustment, this phenomenon explains that extroverts fit into groups because of their sociable nature, while introverts may isolate themselves or prefer only a few close companions. Due to this framework's wide application, the framework has been considered highly suitable with regard to studying social adjustment dynamics in university life.

2.7.2 Person-Environment Fit Theory

The Person-Environment Fit Theory emphasizes the importance of aligning an individual's characteristics with their environment to achieve optimal outcomes. This theory suggests that when a person's traits match the demands and qualities of their surroundings, it fosters satisfaction, well-being, and efficiency.

A study by Kühner et al. (2024) observed that introverted individuals tend to thrive in calm, quiet, and reflective settings, while extroverts are more comfortable in dynamic environments that require group interaction and social engagement. The alignment between personality traits and environmental demands allows individuals to perform effectively, enhancing their overall satisfaction and productivity. This framework is particularly valuable in understanding how different personality types adapt to varying social and academic settings. Kühner et al. (2024) highlight that the interaction between individual traits and environmental factors plays a crucial role in determining the outcomes of such interactions.

Additionally, a study by Rocconi et al. (2020) observed that students who perceived a strong alignment between their personality traits and their academic environments reported higher levels of academic success and personal satisfaction. This demonstrates the significance of creating environments that cater to diverse personality types to maximize student well-being and achievement.

In Malaysian universities, where group discussions and collaborative learning are emphasized, the Person-Environment Fit Theory provides insight into the adaptability of extroverted and introverted students. Extroverted students typically adapt more easily to such settings, given their natural inclination toward social interaction. However, introverted students may face challenges in these environments, necessitating tailored strategies to enhance their academic and social success (Rocconi et al., 2020). For example, providing opportunities for quiet reflection or alternative participation methods can help introverted students feel more comfortable and included.

Further studies also underline the importance of this theory in cross-cultural contexts. Rocconi et al. (2020) investigated how the congruence between personality traits and academic environments influences academic performance and satisfaction. Their findings indicated that students reported higher levels of achievement and well-being when their environments matched their personality types. Similarly, Wang et al. (2012) examined the acculturative adjustment patterns of Chinese international students. Their research highlighted that psychological health and social adjustment improved significantly when students' personality traits aligned with the social norms of the host culture.

A study by Hua et al. (2020) explored how personality traits influence the cross-cultural adjustment of university students in socially diverse environments, such as international students studying abroad. Their study revealed that students with proactive personalities, often associated with extroversion, adapted well to environments requiring frequent social interaction and active group participation. On the other hand, introverted students excelled in settings where quiet spaces and digital communication were prioritized, reducing the stress associated with face-to-face interactions. These findings highlight the importance of tailoring support systems to accommodate different personality needs, especially in culturally diverse environments.

The Person-Environment Fit Theory offers a comprehensive framework for understanding how the compatibility between personality traits and environmental factors shapes individuals' experiences and outcomes. Whether in academic settings, cross-cultural environments, or broader social contexts, ensuring a good fit can enhance satisfaction, productivity, and overall adaptability, benefiting both individuals and the communities they engage with.

2.8 Summary

This chapter reviews literature on the influence of personality traits, specifically introversion and extroversion, on social adjustment among university students. It explores the application of the Big Five Inventory and Person-Environment Fit Theory, highlighting their relevance in understanding personality-environment interactions. Key studies demonstrate that extroverts thrive in collaborative settings while introverts excel in reflective environments, with social adjustment influenced by the alignment of personality traits and environmental factors. Empirical findings reveal that introversion does not inherently lead to loneliness or shyness, emphasizing the role of supportive environments. The chapter underscores the importance of culturally sensitive approaches, such as the Introvert and Extrovert Personality Inventory (IPEI), in studying Malaysian students and lays the groundwork for this research's focus on fostering inclusive strategies for diverse personality types.

CHAPTER 3

METHODOLOGY

3.0 Introduction

This chapter presents the methodology used to conduct the study on the relationship between introversion and extroversion and social adjustment among undergraduate students. It outlines the overall research design and provides detailed explanations of the population and sampling procedures, the instruments used to collect data, and the steps involved in data collection and analysis. The chapter also describes how the reliability and validity of the research tools were ensured, including a pilot study conducted prior to the main data collection. The final section of this chapter provides a summary of the key methodological components and justifies the choices made in the research process.

3.1 Research Design

This study adopts a quantitative research design to explore the relationship between personality traits, specifically introversion and extroversion, and social adjustment among undergraduate students. Quantitative research involves the collection and statistical analysis of numerical data, allowing the researcher to identify measurable patterns, relationships, or differences between variables. This design provides a structured and objective approach, enabling the researcher to draw valid and generalizable conclusions from the data collected.

The study follows a survey method, which is appropriate for obtaining data from a large number of participants efficiently. Survey research is commonly used in the social sciences to gather information related to attitudes, behaviors, and characteristics. In this study, data were collected using self-administered questionnaires. Two established instruments were selected, adapted, and adopted to suit the research objectives. These instruments are the Introversion Scale developed by McCroskey and the Adjustment Inventory for School Students, also known as AISS, developed by Sinha and Singh.

The Introversion Scale by McCroskey measures the degree to which individuals exhibit traits of introversion or extroversion. It captures students' personality characteristics through a series of statements where respondents indicate their level of agreement. The AISS, specifically its social adjustment subscale, measures how well students adjust in social settings, particularly

within the university context. It evaluates aspects such as social interaction, peer relationships, and the ability to cope with social demands. These instruments were chosen based on their relevance to the study and their previous applications in educational and psychological research. Minor modifications were made to align the items with the context of university-level education while maintaining the core constructs being measured.

Data were collected using an online survey distributed through Google Forms. This method was selected due to geographical distance between the researcher and the target participants, who are located at the University of Technology Sarawak. Online data collection allowed for convenient and flexible participation, enabling students to complete the questionnaire at their own pace and location. This method also facilitated efficient data management and minimized logistical challenges such as printing, travel, and manual data entry.

The research design is cross-sectional in nature, meaning that data were collected at a single point in time. A cross-sectional approach is suitable for exploring the current relationship between introversion, extroversion, and social adjustment among undergraduate students. Although this design does not establish causality, it provides a snapshot of existing conditions and relationships during a particular period within the academic semester. It is also time-efficient and appropriate for studies with limited duration and resources.

By employing a quantitative, survey-based, and cross-sectional design, this study aims to provide reliable and valid findings concerning how personality traits influence students' ability to socially adjust in the university environment. The research design is both practical and methodologically sound, ensuring that the study's objectives are addressed systematically and comprehensively.

3.2 Population and Sample

The population for this study consists of all undergraduate students at the University of Technology Sarawak (UTS), encompassing a diverse group of students across different academic years and schools. Undergraduate students at UTS range from Year 1 to Year 5, where Year 1 typically includes students in the early stage of their diploma or degree programs, and Years 2 to 3 represent the core phase of undergraduate study. Year 4 students are generally in their final academic year, while Year 5 students are enrolled in extended programs, which may include industrial training, capstone projects, or additional coursework for professional

qualifications. UTS comprises several academic schools, including the School of Computing and Creative Media, School of Engineering and Technology, School of Business and Management, School of Built Environment, and School of Education and Social Sciences. The inclusion of students from all academic years and schools was intended to provide a comprehensive view of the student population, allowing the study to explore how social adjustment is influenced by personality traits such as introversion and extroversion across different academic and social contexts within the university environment.

A simple random sampling method was employed to select participants for this study. This method gives each student in the population an equal chance of being selected, thereby reducing the potential for selection bias. The use of simple random sampling supports the representativeness of the sample and contributes to the reliability and generalizability of the research findings. This approach is particularly suitable for studies aiming to draw conclusions that reflect the characteristics of the broader population.

To determine the appropriate number of participants, the Krejcie and Morgan sample size determination method was applied. This method is a widely recognized statistical procedure used to calculate the required sample size based on the total population. According to university records, the total number of undergraduate students enrolled at UTS at the time of the study was 4218. Based on this population size, the Krejcie and Morgan formula indicated that a minimum of 350 respondents would be required to ensure a statistically valid sample. This sample size helps to ensure that the findings of the study are both accurate and generalizable to the larger student population.

Prior to the main data collection, a pilot study was conducted to evaluate the reliability and clarity of the research instruments. A total of 30 undergraduate students from the University of Malaysia, Sarawak also known as UNIMAS, participated in the pilot test. These students were selected because they shared similar academic and demographic characteristics with the intended study population. The purpose of the pilot study was to identify any ambiguous or problematic items in the questionnaire and to assess the internal consistency of the measurement scales. The results of the pilot study provided important feedback that led to necessary adjustments and refinements of the instrument. For example, several items were revised or removed to improve reliability based on statistical analysis and participant feedback.

By implementing a structured sampling procedure that included both a carefully selected main sample and a preliminary pilot test, this study ensured that the data collected would be both methodologically sound and reflective of the target population. This process enhances the overall validity and reliability of the study in exploring the relationship between personality traits and social adjustment among undergraduate students.

3.3 Questionnaire Design

The questionnaire design for this study was developed with the primary aim of collecting structured and reliable data to address the research objectives concerning the relationship between introversion, extroversion, and social adjustment among undergraduate students. To achieve this, the instrument was divided into key sections, each targeting specific variables of interest. The questionnaire integrates two established psychological tools: the Introversion Scale by McCroskey to assess personality traits, and the Adjustment Inventory for School Students (AISS) to evaluate social adjustment. The combination of these instruments allows for a focused investigation into the influence of individual personality characteristics on students' ability to adapt socially within the university environment.

The first part of the questionnaire consisted of demographic questions to gather background information such as age, gender, academic program, and year of study. This demographic data provides context for the sample and enables further analysis of subgroup patterns.

The second part of the questionnaire applied the Introversion Scale, which identifies whether a student tends to exhibit more introverted or extroverted behavioral tendencies based on their self-reported responses. This scale is designed to capture personality traits related to communication, sociability, and preference for solitary versus group interaction. Responses in this section were rated on a five-point Likert scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree), allowing for a nuanced understanding of each participant's personality orientation.

The third section of the questionnaire involved the Adjustment Inventory for School Students (AISS), originally developed to measure various dimensions of student adjustment. For the purposes of this study, only the social adjustment subscale was used, as it is most relevant to the research focus. The AISS measures how well students cope with interpersonal

relationships, participation in group activities, and social demands within an academic setting. Unlike the Introversion Scale, the AISS used a three-point response format: Always (1), Sometimes (2), and Never (3). This format was maintained to preserve the scale's original design and scoring system. However, to ensure its applicability in a university context, minor adaptations were made to the wording of certain items to reflect the experiences of undergraduate students rather than school-aged respondents.

To enhance the reliability and contextual suitability of the instrument, the AISS was both adapted and adopted. Some items were adopted directly from the original instrument without modification due to their continued relevance, while others were adapted by rephrasing terms or replacing settings, for example, "classroom" to "lecture hall" to better fit the university environment. This dual approach ensured the instrument maintained theoretical integrity while increasing its validity for the target population.

Together, these sections form a comprehensive and structured tool for capturing the necessary data to examine the relationship between personality traits and social adjustment. The design ensures clarity, ease of response, and suitability for statistical analysis, while retaining the psychometric strength of the original instruments.

3.3.1 Introvert Scale by McCroskey(1982)

The Introversion Scale used in this study was developed by James C. McCroskey in 1982. This scale was originally intended to measure communication apprehension, but over time it has been widely applied to assess introversion and extroversion tendencies through self-perception of social and communication behaviors. The scale includes 18 items, each reflecting how individuals typically respond to social situations, ranging from their comfort in group interactions to their preference for solitude. The instrument is widely cited and validated in communication and personality research, making it a reliable tool for evaluating personality orientations in academic settings.

For this study, the Introversion Scale is particularly suitable as it provides a direct and quantifiable method to classify students along the introversion-extroversion spectrum. Respondents answer each item using a five-point Likert scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree), which allows for a detailed analysis of individual differences.

A higher score indicates stronger introverted tendencies, while a lower score corresponds to extroverted behavior.

This instrument is an ideal fit for the current study because it aligns precisely with the study's second and third objectives: investigating the relationship between introversion or extroversion and social adjustment. It captures the internal characteristics and social preferences of students, which are critical in understanding how different personalities adapt to university social life. The scale's clarity, ease of administration, and strong internal reliability, as reaffirmed by the pilot study conducted with UNIMAS students for further support its appropriateness for this context. By using this scale, the study can accurately assess personality dimensions that influence students' social experiences and adjustment processes in higher education.

3.3.2 Adjustment Inventory for School Students (AISS)

The Adjustment Inventory for School Students (AISS) was developed by A.K.P. Sinha and R.P. Singh in 1993. It is a standardised instrument designed to measure adjustment in three key domains: emotional, educational, and social. For the purpose of this study, only the social adjustment subscale was utilized, which contains 20 items aimed at assessing students' ability to adapt to social demands, maintain interpersonal relationships, and participate effectively in peer and academic environments.

The AISS social adjustment subscale uses a three-point rating format: Always (1), Sometimes (2), and Never (3), to reflect the frequency of behaviors and feelings related to social integration. The simplicity of this scale ensures that responses are straightforward and easy to interpret, while the scoring system allows for a clear categorization of adjustment levels.

This instrument is particularly well-suited for this study as it directly addresses the first research objective, which is to assess the overall level of social adjustment among undergraduate students. Its focus on social behavior within educational settings makes it highly relevant for understanding the dynamics of student interactions at university. Although originally designed for school students, the core themes of the AISS remain applicable to higher education contexts, especially with appropriate modifications to terminology and setting-specific references.

The AISS is the best fit for this study because it has a strong foundation in psychological theory and has been successfully used in numerous studies examining student behavior and well-being. Moreover, its emphasis on observable social behaviors aligns well with the goal of quantifying adjustment outcomes in relation to personality traits. The scale's established validity, combined with its adaptability and diagnostic utility, makes it an effective tool for examining social adjustment among university students in a Malaysian context.

3.3.2.1 Adoption of AISS item

Several items from the original AISS questionnaire will be directly adopted without modification. These items have been selected because they are relevant to university students' experiences and effectively measure aspects of social adjustment. The constructs assessed by AISS, such as students' ability to interact with peers, adapt to new environments, and manage academic stress, are applicable to both school and university settings. Since these fundamental aspects of social adjustment remain consistent across different educational levels, these items were used in their original form to maintain the reliability and validity of the questionnaire.

3.3.2.2 Adaption of AISS item

While some items from the AISS are suitable for direct adoption, others require adaptation to better reflect the context of university students. The original AISS was designed for school students, meaning that certain terms and scenarios may not align with the experiences of undergraduate students. To address this, the wording of some questions will be modified to ensure relevance. For example, terms such as "school" was replaced with "university," and "classmates" was changed to "course mates" or "peers" to better fit the academic and social environment of higher education. Additionally, some questions were rephrased to address the unique challenges faced by university students, such as adjusting to independent living, managing a heavier academic workload, and navigating more diverse social interactions. The adaptation process aims to ensure that all questions are clear, meaningful, and applicable to the study's target population.

3.4 Structure of Questionnaire

The final version of the questionnaire was systematically structured into three main sections, each designed to align with the research objectives and comprehensively assess the relationship between introversion, extroversion, and social adjustment among undergraduate

students. The structure of the instrument ensures that the data collected was both relevant and sufficient to address the stated research questions and hypotheses.

The first section of the questionnaire focused on collecting demographic information from the participants. This section included items related to age, gender, year of study, and academic program. The inclusion of demographic variables was intended to provide background data on the sample and to allow for the examination of potential patterns or differences in social adjustment across various groups. Such information is essential for understanding the distribution of personality traits and adjustment levels within the student population and for conducting subgroup analyses if required.

The second section comprised the social adjustment component, adapted from the Adjustment Inventory for School Students (AISS) developed by Sinha and Singh (1993). The original AISS measures several domains of adjustment, but for the purposes of this study, the focus was narrowed to items relevant to social adjustment in a university context. These items were selected and modified to better reflect the experiences of undergraduate students in higher education. The content of this section included items assessing peer relationships, communication skills, social integration, adaptability in social situations, and students' comfort in navigating social roles within academic and residential environments. The objective of this section was to measure how well students adjust socially, which is a central construct in this research.

The third section contained the Introvert Scale, originally developed by McCroskey (1998), which assesses self-perceived levels of introversion and extroversion. This personality scale was selected for its simplicity and established use in communication and personality studies. The scale items were used to evaluate individual tendencies such as preference for solitude, ease or discomfort in group settings, responsiveness in social interactions, and general social energy. These traits provide insight into whether a student is more introverted or extroverted, which in turn supports the investigation into how these personality types may influence their levels of social adjustment.

The Introvert Scale used a five-point Likert scale format, ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). This scale allowed respondents to express the extent to which they agreed with statements related to their personality traits, offering a more nuanced and graduated assessment of introversion and extroversion. The Likert scale is commonly used in

psychological and social research due to its clarity, reliability, and suitability for statistical analysis. In contrast, the social adjustment section, adapted from the Adjustment Inventory for School Students (AISS), used a three-point response format: Always (1), Sometimes (2), and Never (3). This categorical response style aligns with the original AISS structure and is effective in capturing the frequency of behaviors and experiences related to social adjustment. Using both scale types ensures that the measurement tools are aligned with their original designs while also enabling the collection of valid and interpretable data.

To ensure the reliability and clarity of the questionnaire items, a pilot study was conducted with 30 undergraduate students. The pilot test helped identify ambiguities, unclear wording, and items with weak internal consistency. Based on the findings, several items from the AISS that reduced the overall reliability of the social adjustment scale were removed. This refinement process increased the internal consistency of the scale, as confirmed through Cronbach's alpha reliability analysis. The Introvert Scale demonstrated acceptable reliability without the need for modification. These steps ensured that the final instrument was both psychometrically sound and appropriate for the study context.

Overall, the questionnaire was carefully developed through a combination of adaptation and validation processes. It integrates established measurement tools with context-specific adjustments, ensuring that it effectively captures the constructs of interest, introversion, extroversion, and social adjustment, among undergraduate students in a Malaysian university setting.

3.5 Pilot Study

Before administering the main study, a pilot study was conducted to assess the reliability and internal consistency of the research instruments: the Introvert Scale developed by McCroskey and the Adjustment Inventory for School Students (AISS). The pilot study involved a sample of 30 undergraduate students from Universiti Malaysia Sarawak (UNIMAS), selected to represent the characteristics of the broader population intended for the main study. Conducting a pilot study serves several important functions, such as identifying any ambiguities in the questionnaire items, evaluating the clarity of the instructions, estimating the time required for completion, and most importantly, assessing the psychometric properties of the scales used.

Reliability analysis was carried out using Cronbach's Alpha, which is a statistical measure of internal consistency. Internal consistency refers to the extent to which all the items in a scale measure the same underlying construct. According to George and Mallery (2003), a Cronbach's Alpha coefficient of 0.70 and above is considered acceptable, while values above 0.80 are considered good. Instruments that do not meet this threshold are typically revised by removing poorly performing items that negatively affect reliability. The findings of the reliability analysis for both scales are detailed in the following subsections.

3.5.1 Reliability Test for Introvert Scale

The Introvert Scale by McCroskey is designed to assess individual differences in personality, particularly focusing on the continuum between introversion and extroversion. It consists of 18 self-report items that require respondents to indicate the degree to which certain statements reflect their personality traits. The primary objective of this scale is to measure the level of social orientation, preference for solitude versus social interaction, and other behavioral characteristics associated with introversion and extroversion.

In the pilot study, the responses from 30 students were analyzed to determine the internal consistency of the scale. The Cronbach's Alpha coefficient for the Introvert Scale was found to be 0.787. This value exceeds the minimum threshold of 0.70, indicating that the scale has good reliability and that its items are consistent in measuring the personality traits it is designed to assess. As such, no modifications or deletions of items were necessary for this instrument.

The result suggests that the Introvert Scale is appropriate for use in the main study and is capable of providing reliable scores for assessing the personality traits of undergraduate students in relation to their social adjustment.

Table 3.5.1 presents the Cronbach's Alpha result for the Introvert Scale.

Reliability Statistics		
Cronbach's Alpha Based on Standardized Items		
Cronbach's Alpha	Items	N of Items
.787	.789	18

Table 3.5.1: Cronbach's Alpha for Introvert Scale

3.5.2 Reliability Test for AISS Scale

The Adjustment Inventory for School Students (AISS) is a standardized tool designed to measure the level of social, emotional, and educational adjustment among students. In this study, the focus was specifically on the social adjustment component of the scale, as it aligns with the objectives of the research. The original version of the AISS used in the pilot study contained 20 items, each addressing different aspects of how students cope with social environments, interpersonal interactions, and integration within the academic setting.

Initial reliability testing of the AISS scale with the 30 participants resulted in a Cronbach's Alpha coefficient of 0.574. This value falls below the acceptable threshold of 0.70, indicating that the items in the scale were not sufficiently consistent in measuring the construct of social adjustment. In response to this finding, item-total statistics were reviewed to identify specific items that were reducing the overall internal consistency of the scale.

Through this analysis, four items: item 3, item 9, item 13, and item 14, were found to have low item-total correlations or were contributing negatively to the overall reliability. These items were subsequently removed from the scale, reducing the total number of items from 20 to 16. After the removal of these items, the scale was reanalysed, and the Cronbach's Alpha value improved significantly to 0.715. This revised value surpasses the minimum threshold and indicates that the remaining items in the scale reliably measure the construct of social adjustment.

The results suggest that the modified version of the AISS is suitable for use in the main study. The improved internal consistency after item deletion indicates that the remaining items function cohesively and provide reliable measurements of students' social adjustment in a university context.

Tables 3.5.2 and 3.5.2.1 show the reliability analysis before and after item deletion.

Reliability Statistics		
Cronbach's Alpha Based on Standardized Items		
Cronbach's Alpha	Items	N of Items
.574	.591	20

Table 3.5.2: Cronbach's Alpha for AISS Scale

Reliability Statistics		
Cronbach's Alpha Based on Standardized Items		
Cronbach's Alpha	Items	N of Items
.715	.717	16

Table 3.5.2.1: Cronbach's Alpha for AISS Scale after deleting item

3.5.3 Conclusion of the Pilot Study

The pilot study provided important insights into the reliability of the two research instruments employed in this study. The Introvert Scale demonstrated good reliability in its original form, requiring no changes. This suggests that the scale is well-constructed and appropriately measures introversion and extroversion among undergraduate students.

In contrast, the AISS initially showed low internal consistency. However, through the deletion of four underperforming items, the scale's reliability improved to an acceptable level. This adjustment ensures that the AISS is a valid and consistent tool for assessing social adjustment among the study's target population.

Overall, the pilot study confirmed that both instruments, after appropriate validation procedures, are suitable for use in the main study. They are expected to produce reliable and consistent data, allowing for meaningful analysis of the relationship between personality traits and social adjustment among undergraduate students.

3.6 Data Collection Procedure

To ensure a systematic and reliable data collection process, the researcher adopted a structured and organized approach. After conducting a pilot study with undergraduate students from Universiti Malaysia Sarawak, the reliability of both the Introvert Scale by McCroskey and the Adjustment Inventory for School Students was confirmed, allowing these instruments to be used confidently for the main study at the University of Technology Sarawak. Data collection was carried out using Google Forms, which was selected for its accessibility, simplicity, and ability to reach participants regardless of their physical location. This digital platform enabled the research team to efficiently distribute the questionnaire to a large number of students across various districts and academic programs within the university.

Participants received the questionnaire link through email and relevant online platforms. Clear instructions were included at the beginning of the form to explain the purpose of the study and how to respond to the items appropriately. The questionnaire contained two key sections. The first section used the Introvert Scale by McCroskey to assess students' personality traits on the introversion-extroversion spectrum. The second section used the social adjustment component of the Adjustment Inventory for School Students to measure students' interpersonal adaptability, peer relationships, and overall social functioning in a university environment. The instruments were adapted slightly to reflect the university context while preserving their original structure and meaning.

The data collection window remained open for a duration of two months to give students adequate time to participate. During this period, follow-up reminders were sent out periodically to encourage participation among those who had not yet completed the questionnaire. The researcher actively monitored the responses to ensure that the data were complete, coherent, and free from technical errors. Any issues that arose during this stage were addressed promptly to maintain the quality and accuracy of the data.

Once the data collection phase was completed, all responses were downloaded and transferred into the Statistical Package for the Social Sciences Version 26 (SPSS 26) for analysis. Participants' confidentiality and anonymity were strictly protected throughout the process. No identifying information was requested or stored, and only the research team had access to the collected data. All information was stored securely and in compliance with ethical research practices and institutional data protection policies. This comprehensive and ethical approach to data collection ensured the reliability, efficiency, and academic integrity of the entire research process.

3.7 Methods of Analyzing Data

This section outlines the analytical procedures used to process and interpret the data collected for this study. The process consisted of three major components: data preparation, statistical analysis techniques aligned with each research objective, and the software tool used for conducting these analyses. Each phase was carefully planned to ensure that the findings derived were reliable, valid, and aligned with the research questions posed in this study.

3.7.1 Data Preparation and Cleaning

Prior to any statistical analysis, the raw data collected through the Google Forms survey was subjected to a detailed screening and cleaning process. Each submission was reviewed to ensure that all questions were answered and that responses were logical and complete. Questionnaires that contained missing data, duplicate entries, or inconsistencies were carefully examined. If any responses were found to be incomplete or improperly filled, they were either corrected when possible or excluded from the final dataset to preserve the integrity of the research findings.

Once the responses were verified, the data was systematically coded and entered into the Statistical Package for the Social Sciences (SPSS) Version 26. A pre-designed coding guide was used to ensure that each variable was correctly labeled and formatted in a consistent manner. This process included assigning numerical codes to categorical variables and double-checking the input data to avoid errors during analysis. The data was also reviewed using SPSS's built-in tools to identify any outliers, missing values, or discrepancies that could affect the validity of the results. These preparatory steps were essential to ensure the accuracy and consistency of the analysis that followed.

3.7.2 Statistical Analysis Techniques

To analyze the data and address the research objectives, a range of inferential statistical tests were selected based on the type of variable and the nature of each hypothesis.

For the first research objective, which was to investigate whether undergraduate students have a high level of social adjustment, a One-Sample t-test was used. This test allowed the researcher to determine whether the average social adjustment score among the sample significantly differed from a pre-defined benchmark or theoretical mean. The result of this test provided insight into whether students, as a group, reported high, average, or low levels of social adjustment.

To fulfill the second research objective, which aimed to examine the relationship between introversion and social adjustment, the Pearson Product-Moment Correlation coefficient was calculated. This test is appropriate for examining the strength and direction of linear relationships between two continuous variables. In this context, it enabled the researcher to

assess whether higher levels of introversion were associated with lower levels of social adjustment among undergraduate students.

Similarly, the third objective focused on identifying whether a relationship exists between extroversion and social adjustment. The Pearson Correlation test was also employed for this analysis. By examining the correlation between extroversion scores and social adjustment levels, the study aimed to determine whether students who scored higher in extroversion traits exhibited greater adaptability in social settings.

For the fourth research objective, which was to determine whether there is a significant difference between introverted and extroverted students in terms of their social adjustment, an Independent Samples t-test was applied. This statistical test is suitable for comparing the means of two independent groups. In this case, students classified as introverts and those classified as extroverts. The purpose of this test was to evaluate whether the differences in social adjustment scores between these two personality groups were statistically significant, thereby providing deeper insight into how personality traits may influence social behavior in the university context.

Each statistical test was chosen carefully to match the measurement level of the data and the specific analytical goals of the study. The use of these techniques allowed for a comprehensive examination of both individual relationships between variables and group-level differences.

3.7.3 SPSS Version 26

All data analysis in this study was conducted using the Statistical Package for the Social Sciences (SPSS) Version 26. SPSS is a widely used software in psychological and educational research due to its capability to manage large datasets, perform a wide range of statistical analyses, and present results in a clear and interpretable format. The software's user-friendly interface and powerful analytical tools make it ideal for researchers who need to perform both descriptive and inferential statistical procedures.

In this study, SPSS was used to generate descriptive statistics, including means and standard deviations, and to carry out inferential tests such as t-tests and Pearson correlation analyses. The program also facilitated data cleaning, recoding of variables, and cross-checking for errors

prior to conducting the final statistical procedures. Its capacity to handle both simple and complex analyses made it a suitable choice for answering the research questions and drawing meaningful conclusions regarding the relationship between personality traits and social adjustment among undergraduate students at the University of Technology Sarawak.

By combining appropriate statistical techniques with a reliable software platform, the study was able to ensure that the analysis process was rigorous, systematic, and aligned with the best practices in social science research.

3.8 Summary

Chapter 3 explained the research design, population, sample, instruments, data collection, and data analysis methods used in the study. The research uses a quantitative design and survey approach to explore how introversion and extroversion affect social adjustment among undergraduate students at the University of Technology Sarawak (UTS). The main instruments for data collection are the Introvert Scale by McCroskey and the Adjustment Inventory for School Students (AISS), which were administered through Google Forms for convenience and accessibility.

The study included a sample of 350 undergraduate students, selected using simple random sampling to ensure fair representation. The sample size was calculated using the Krejcie and Morgan method, based on the total UTS population of 4,218 students. A pilot study with UNIMAS students were conducted to test the reliability of the instruments.

Data collection was managed through Google Forms, allowing students to complete the surveys at their convenience and ensuring higher participation rates. The data were collected anonymously, and responses will be stored securely.

SPSS Version 26 was used for data analysis. Descriptive statistics summarised levels of introversion and extroversion. A One-Sample T-test was used to investigate the levels of social adjustment, Independent Samples T-test compared social adjustment scores between introverted and extroverted students, while correlation analysis assessed the relationships between introversion, extroversion, and social adjustment. This structured approach helps answer the research questions and test the hypotheses to provide clear insights into the influence of personality traits on social adjustment among UTS students.

CHAPTER 4

FINDINGS AND DISCUSSION

4.0 Introduction

This chapter presents the findings and discussion of the study on the relationship between introversion, extroversion, and social adjustment among undergraduate students. The data were analysed using both descriptive and inferential statistical techniques. Descriptive statistics were employed to summarise key demographic variables, including gender, age, year of study, and faculty. Inferential statistical methods, namely the Independent Samples T-test, the One-Sample T-test, and Pearson's correlation, were used to test the study's hypotheses and to examine the relationships between personality traits and social adjustment.

4.1 Reliability Analysis After Instrument Refinement

Preceding to the main data collection, a pilot study was conducted to assess the reliability and clarity of the research instruments. Based on the feedback and initial analysis, several items were removed from both the Introversion Scale by McCroskey and the Adjustment Inventory for School Students (AISS) to improve internal consistency and contextual relevance.

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.787	.789	18

Table 4.1.1 Cronbach Alpha for Introversion Scale by McCroskey

The reliability analysis for the refined Introversion Scale by McCroskey shows a Cronbach's alpha of 0.787. This indicates acceptable internal consistency of the scale after certain items were removed following the pilot study. The value exceeds the commonly accepted threshold of 0.7, confirming the scale's reliability for use in the main study.

Reliability Statistics		
Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.715	.717	16

Table 4.1.1 Cronbach Alpha for Introversion Scale by McCroskey

The Adjustment Inventory for School Students (AISS) demonstrated a Cronbach's alpha of 0.715 after refinement, exceeding the threshold of 0.7. This result suggests satisfactory internal consistency and confirms that the instrument is reliable for measuring social adjustment among undergraduate students.

4.2 Demographic Profile of Respondents

This section presents the demographic characteristics of the respondents who participated in the study. Descriptive statistics were used to summarise the distribution of respondents based on gender, age, year of study, and faculty. Frequencies and percentages are presented in tabular form, while graphical representations are included to visually illustrate the distribution. The data provides an overview of the background of the undergraduate students involved in the research.

4.2.1 Gender

Gender					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Female	190	54.1	54.1	54.1
	Male	161	45.9	45.9	100.0
	Total	351	100.0	100.0	

Table 4.2.1 Frequency and Percentage of Participants' Gender

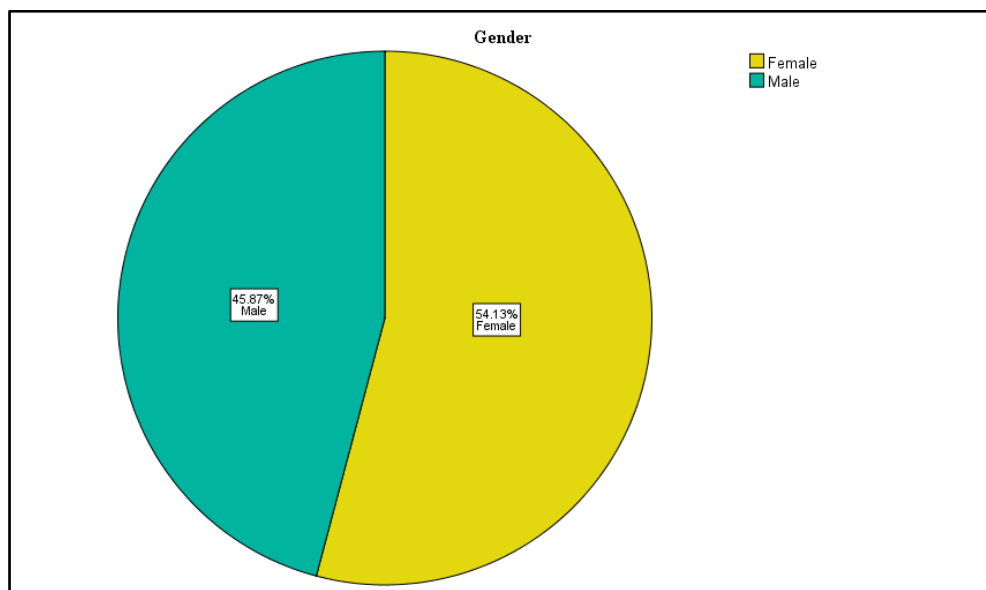


Figure 4.2.1 Pie Chart of Participants' Gender

As shown in Table 4.2.1 and Figure 4.2.1, a total of 351 students participated in the study. Among them, 190 were female (54.13%), while 161 were male (45.87%). The sample is slightly skewed towards female participants, but overall presents a fairly balanced gender

composition, which allows for meaningful comparative analysis between male and female respondents.

4.2.2 Age

Age					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	18 - 20	55	15.7	15.7	15.7
	20 - 22	132	37.6	37.6	53.3
	22 - 24	102	29.1	29.1	82.3
	24 and above	62	17.7	17.7	100.0
	Total	351	100.0	100.0	

Table 4.2.2 Frequency and Percentage of Participants' Age

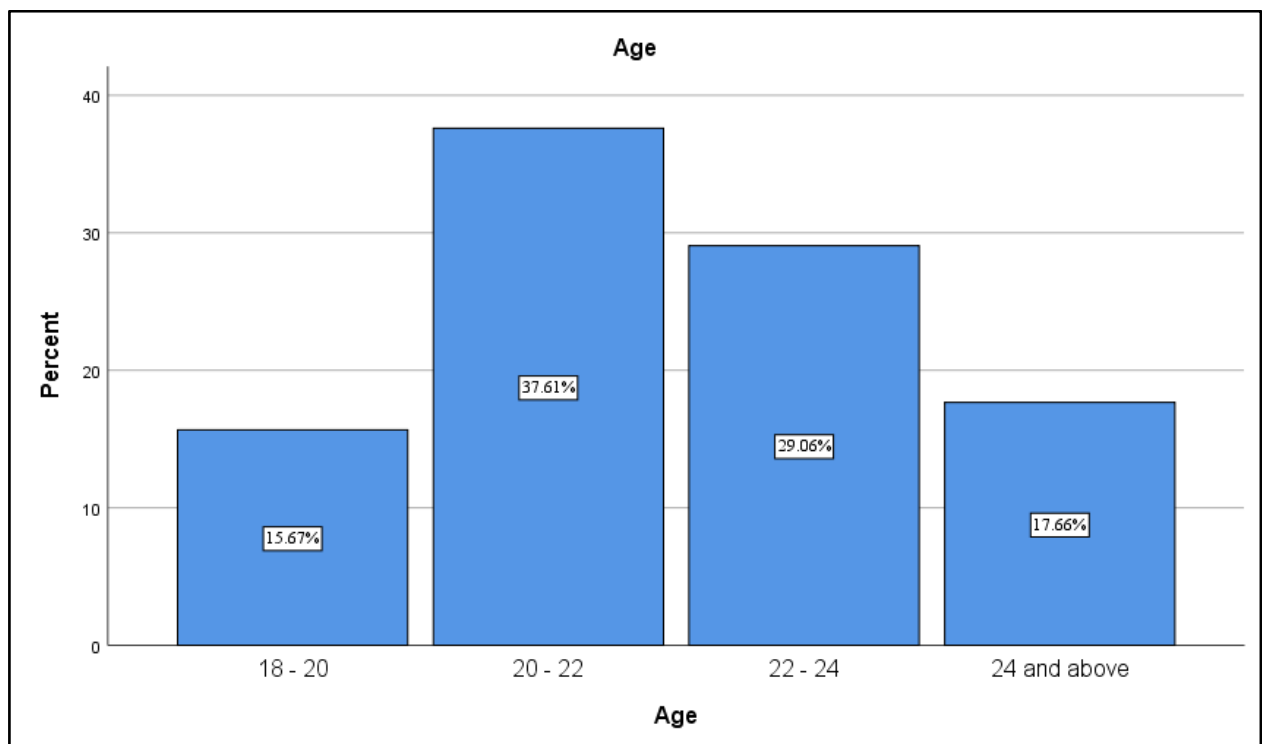


Figure 4.2.2 Bar Chart of Participants' Age

The age distribution of the participants is illustrated in Table 4.2.2 and Figure 4.2.2. The largest age group was 20–22 years, comprising 132 respondents or 37.61% of the total. This is followed by the 22–24 age group, with 102 participants or 29.06%. Followed by the 24 and above age group, consisting of 62 participants or 17.66%. The smallest group, students

aged 18-20, accounted for 62 respondents or 15.67 %. This distribution reflects a typical university demographic, with the majority of students falling within their early twenties.

4.2.3 Year of Study

		Year of Study			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Year 1	59	16.8	16.8	16.8
	Year 2	100	28.5	28.5	45.3
	Year 3	139	39.6	39.6	84.9
	Year 4	53	15.1	15.1	100.0
	Total	351	100.0	100.0	

Table 4.2.3 Frequency and Percentage of Participants' Year of Study

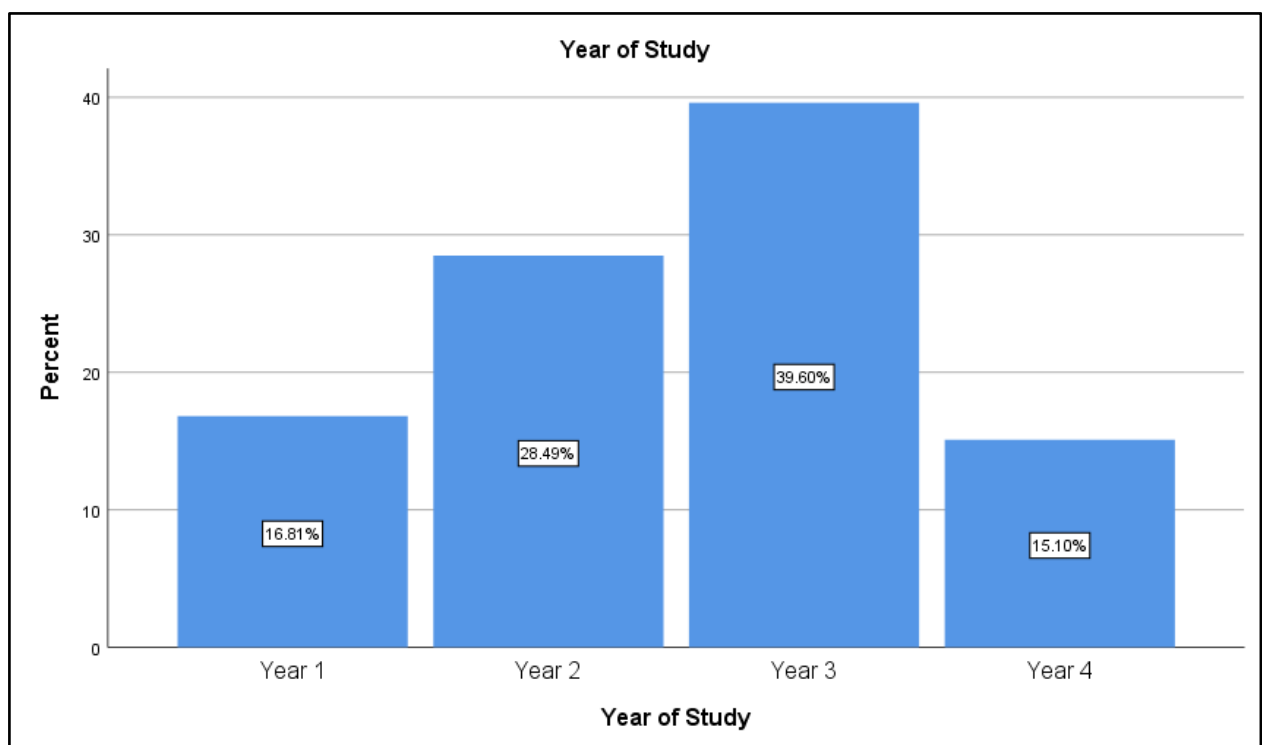


Figure 4.2.3 Bar Chart of Participants' Year of Study

Table 4.2.3 and Figure 4.2.3 illustrate the distribution of respondents according to their year of study. Year 3 students accounted for the largest proportion of participants, with 139 respondents representing 39.60% of the total sample. This was followed by Year 2 students, who made up 100 respondents or 28.49%. Year 1 students comprised 59 individuals, contributing 16.81% to the overall sample. The fewest respondents were from Year 4, with 53

students, accounting for 15.10%. This distribution shows strong representation from the lower and middle academic years, with more limited input from final-year students.

4.2.4 School

		School			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	School of Built Environment	116	33.0	33.0	33.0
	School of Business and Management	119	33.9	33.9	67.0
	School of Computing and Creative Media	55	15.7	15.7	82.6
	School of Engineering and Technology	61	17.4	17.4	100.0
	Total	351	100.0	100.0	

Table 4.2.4 Frequency and Percentage of Participants' School

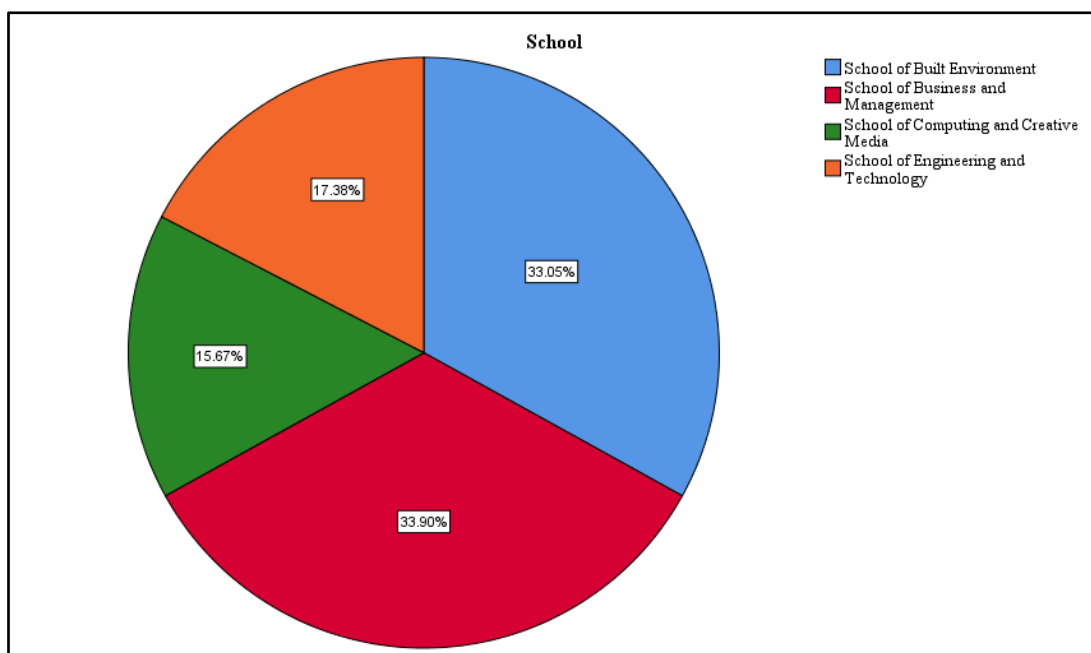


Figure 4.2.4 Pie Chart of Participants' School

In this university, the term "school" is used to represent the respective faculties. Table 4.2.4 and Figure 4.2.4 display the distribution of respondents according to their school. The School of Business and Management recorded the highest number of respondents, with 119 students, accounting for 33.9 %. The School of Built Environment followed closely with 116 students (33.0 %). The School of Engineering and Technology contributed 61 respondents

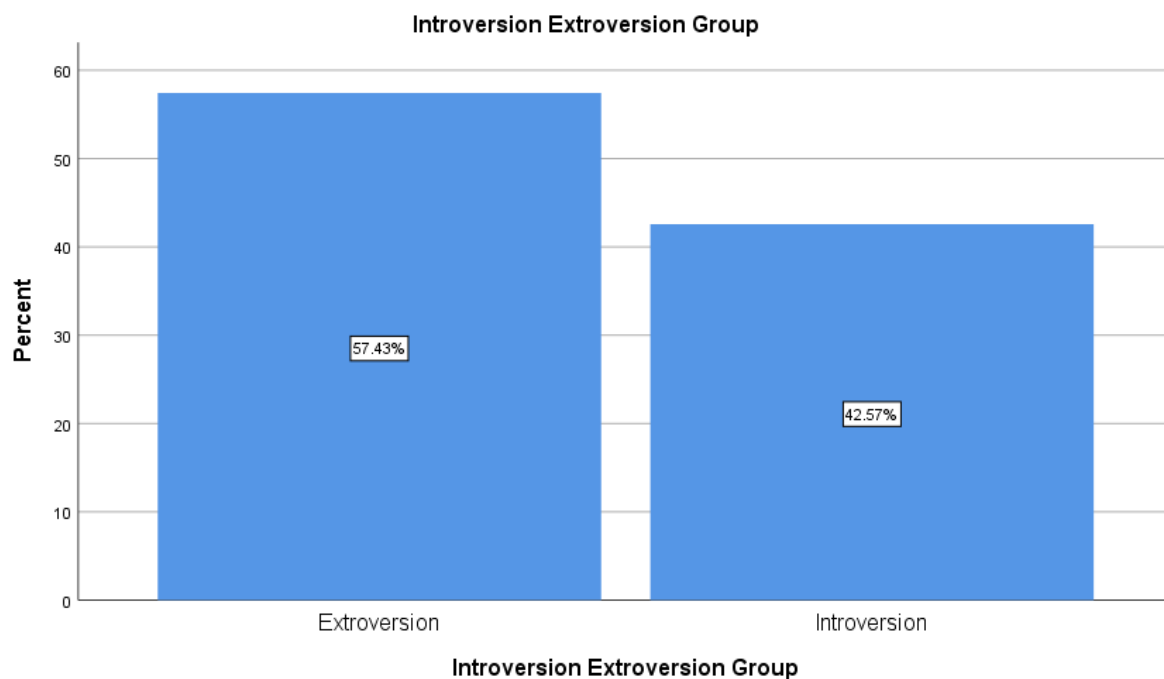
(17.4 %), while the School of Computing and Creative Media had the lowest number of participants, totaling 55 students (15.7 %). This distribution indicates a balanced representation from the major academic divisions within the university, with particularly strong participation from business, management, and built environment students.

4.3 Descriptive Statistics for Main Variables

This section presents the descriptive statistical analysis of the key variables in the study, including the distribution of introversion and extroversion among undergraduate students, levels of social adjustment, as well as the overall means and standard deviations for introversion, extroversion, and social adjustment. These statistics provide an overview of the sample characteristics and set the foundation for subsequent inferential analyses.

4.3.1 Number and Percentage of Introverts and Extroverts

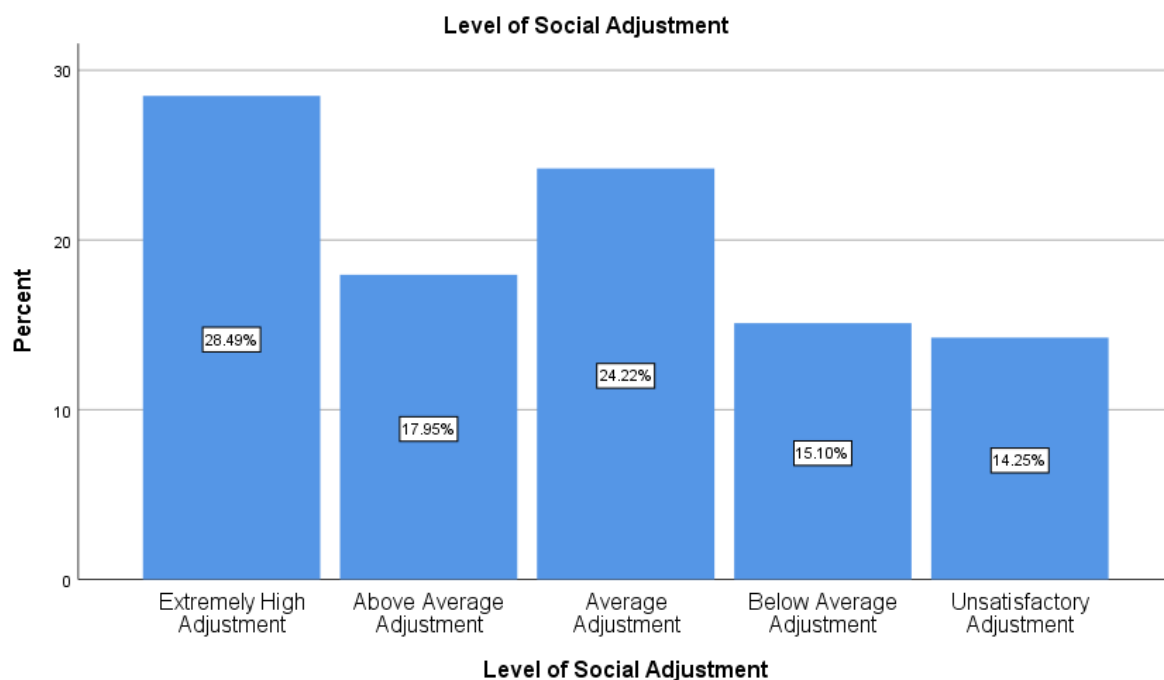
		Introversion Extroversion Group			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Extroversion	201	57.3	57.4	57.4
	Introversion	149	42.5	42.6	100.0
	Total	350	99.7	100.0	
Missing	System	1	.3		
Total		351	100.0		



According to Table 4.3.1.1 and Figure 4.3.1.1, the majority of undergraduate students in this study identified as extroverts, comprising 57.43% of the sample, while introverts made up 42.57%. This indicates a somewhat higher prevalence of extroverted traits among the respondents.

4.3.2 Level of Social Adjustment among Undergraduates

		Level of Social Adjustment			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Extremely High Adjustment	100	28.5	28.5	28.5
	Above Average Adjustment	63	17.9	17.9	46.4
	Average Adjustment	85	24.2	24.2	70.7
	Below Average Adjustment	53	15.1	15.1	85.8
	Unsatisfactory Adjustment	50	14.2	14.2	100.0
	Total	351	100.0	100.0	



According to Table 4.3.2.1 and Figure 4.3.2.1, the largest proportion of participants (28.49%) were classified as having extremely high social adjustment. This suggests that a significant number of students are well adapted socially within their university environment. Following this, 17.95% of students showed above average social adjustment, indicating a fairly

positive social adaptation. A notable portion of the sample, 24.22%, fell into the average social adjustment category, representing students who maintain a moderate level of social adjustment. On the other hand, 15.10% of respondents exhibited below average social adjustment, which may indicate some challenges in social adaptation. Furthermore, 14.25% of students were classified under unsatisfactory social adjustment, reflecting difficulties in adjusting socially within the university context. It is important to highlight that none of the participants were categorised as having extremely unsatisfactory social adjustment.

4.3.3 Overall Mean and Standard Deviation for Extroversion, Introversion and Social Adjustment

The overall mean and standard deviation show the average levels of extroversion, introversion, and social adjustment among the students. These results help us understand how common or different these traits are in the group.

4.3.3.1 Overall Mean and Standard Deviation for Introversion

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Sum_Introversion	149	48	51	49.33	1.348
Valid N (listwise)	149				

Based on Table 4.3.3.1, the mean introversion score among the participants was 49.33, with a standard deviation of 1.348. This suggests that the respondents generally displayed moderate introverted characteristics with low variability in scores.

4.3.3.2 Overall Mean and Standard Deviation for Extroversion

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Sum_Extroversion	201	23	24	23.75	.436
Valid N (listwise)	201				

As indicated in Table 4.3.4.1, extroversion had a mean score of 23.75 with a relatively small standard deviation of 0.436. This reveals a consistent level of extroverted traits across participants, with minimal score dispersion.

4.3.3.2 Overall Mean and Standard Deviation for Social Adjustment

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Level of Social Adjustment	351	3	6	4.33	1.039
Valid N (listwise)	351				

According to Table 4.3.5.1, the average social adjustment score was 4.33, accompanied by a standard deviation of 1.039. These results indicate that the sample generally exhibited satisfactory social adjustment, though with moderate variability in scores.

4.4 Hypothesis Testing and Inferential Analysis

This section presents the inferential statistical analyses conducted to test the study's hypotheses regarding the differences and relationships between introversion, extroversion, and social adjustment among undergraduate students. It includes tests comparing levels of social adjustment between personality types and examines the correlations between introversion, extroversion and social adjustment. Each analysis follows a discussion interpreting the findings in the context of the research objectives.

4.4.1 The Level of Social Adjustment Difference in Undergraduate Students on Social Adjustment

Objective 1: To investigate whether undergraduate students have a high level of social adjustment.

To address this, the following hypothesis was tested:

Null Hypothesis (H_0): The mean social adjustment score is less than or equal to 4, indicating moderate or lower social adjustment.

A one-sample t-test was conducted to determine whether the mean social adjustment score of undergraduate students significantly differed from the scale midpoint of 4. Table 4.4.1.1 presents the descriptive statistics, while Table 4.4.1.2 shows the One Sample T-test results.'

One-Sample Statistics				
	N	Mean	Std. Deviation	Std. Error Mean
Level of Social Adjustment	351	4.33	1.039	.055

Table 4.4.1.1 One-Sample Statistics for Level of Social Adjustment

One-Sample Test						
Test Value = 4						
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Level of Social Adjustment	5.961	350	.000	.330	.22	.44

Table 4.4.1.2 One Sample T-test for Level of Social Adjustment

As shown in Table 4.4.1.1, the mean social adjustment score was 4.33 (SD = 1.039). According to the results in Table 4.4.1.2, this value was significantly higher than the test value of 4, $t(350) = 5.961$, $p < .001$, with a mean difference of 0.33. The 95% confidence interval for the mean difference ranged from 0.22 to 0.44.

Since the p-value is less than the significance threshold of .05, the null hypothesis is rejected. It can be concluded that undergraduate students in this sample demonstrate a slightly above-average and statistically significant level of social adjustment.

4.4.1.1 Discussion

The one-sample t-test conducted in this study revealed that undergraduate students reported a significantly higher-than-average level of social adjustment ($M = 4.33$, $SD = 1.039$), which was statistically greater than the test value of 4, $t(349) = 5.961$, $p < .001$. This result supports the alternative hypothesis and suggests that students generally perceive themselves as well-adjusted to their social environment at the university level.

This finding suggests that UTS undergraduates, as a group, demonstrate a slightly above-average level of social adjustment, indicating that most students are effectively navigating the social aspects of university life. Their ability to form meaningful peer connections, participate in campus activities, and access available support systems reflects a generally positive adaptation to the university environment. This level of adjustment is likely

influenced by the institution's efforts to promote inclusivity, engagement, and community-building, which together help students develop a sense of belonging and social confidence.

This finding aligns with previous studies indicating that university environments often promote positive social adaptation due to exposure to diverse peer groups, extracurricular activities, and institutional support systems (Zarbat, 2023). The moderately high mean score suggests that, overall, students are coping well with the social demands of university life, which may include developing interpersonal relationships, managing academic pressures, and engaging in campus culture.

The result also reflects the importance of social support networks in enhancing students' social adjustment. Tinto's 1993 model of student integration, social integration alongside academic integration is a key factor in students' overall adjustment and retention (Hovdhaugen et. al., 2023). The high level of social adjustment observed in this study may indicate that the majority of students have successfully formed meaningful peer connections, which positively influence their sense of belonging and psychological well-being.

However, the standard deviation of 1.039 indicates a reasonable spread of responses, suggesting that not all students experience equally high levels of adjustment. This variability supports the idea that while institutional factors may generally promote adjustment, individual differences, such as personality traits, coping strategies, or cultural background, can still significantly influence adjustment outcomes (Schmitz & Schmitz, 2022).

Moreover, although the mean was significantly above average, the presence of 29.35% of students falling into "below average" or "unsatisfactory" categories, as shown in the descriptive statistics section, indicates that a non-negligible proportion of students may be at risk of poor adjustment outcomes. This underlines the importance of early identification and targeted intervention by student affairs professionals and counselling services.

In summary, the results confirm that undergraduate students, as a group, show a significantly high level of social adjustment. This finding is consistent with literature emphasising the supportive role of university contexts in promoting social adaptation, but also highlights the need to address individual differences and support students who may be struggling to adjust effectively.

4.4.2 The Relationship Between Introversion and Social Adjustment

Objective 2: To investigate the relationship between introversion and social adjustment among undergraduate students.

The following hypothesis was formulated:

Null Hypothesis (H_0): There is no significant relationship between social adjustment and introversion among undergraduate students.

Tests of Normality						
	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Sum_Introversion	.281	149	.000	.741	149	.000
Sum_SocialAdjustment	.248	149	.000	.735	149	.000

a. Lilliefors Significance Correction

Table 4.4.2.1 Test of Normality for Introversion and Social Adjustment

Before conducting the Pearson correlation analysis, a test of normality was performed using the Shapiro-Wilk test. The results indicated that the significance value was less than .05 ($p = .000$), which suggests a violation of the assumption of normality. However, due to the large sample size ($n = 359$), Pearson's correlation is considered robust against such violations and is still appropriate for use.

Correlations			
		Sum_Introversion	Sum_SocialAdjustment
Sum_Introversion	Pearson Correlation	1	-.894**
	Sig. (2-tailed)		.000
	N	149	149
Sum_SocialAdjustment	Pearson Correlation	-.894**	1
	Sig. (2-tailed)	.000	
	N	149	149

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

Table 4.4.2.2 Pearson Correlation Between Introversion and Social Adjustment

As shown in Table 4.4.2.1, the correlation between introversion and social adjustment was found to be strong and negative, $r(359) = -.894$, $p < .001$. This statistically significant

result indicates that as levels of introversion increase, levels of social adjustment tend to decrease. The strength of the correlation suggests a substantial inverse relationship between these two variables.

Given the significance of the correlation result, the null hypothesis (H_0) is rejected. The alternative hypothesis (H_1) is therefore accepted, confirming that a significant relationship exists between introversion and social adjustment among undergraduate students.

4.4.2.1 Discussion

The results of the Pearson correlation analysis revealed a strong, statistically significant negative relationship between introversion and social adjustment ($r = -.894, p < .001$). This finding indicates that as levels of introversion increase, levels of social adjustment decrease among undergraduate students. The strength of this correlation shows a strong negative link between introversion and social adjustment. This means that students who are more introverted often find it harder to adjust socially at university. It suggests that personality traits, especially being introverted, have an important effect on how well students are able to fit in and connect with others in the university environment.

Additionally, these findings are supported by both the theoretical and conceptual frameworks used in this study. The results align with the theoretical framework, which draws on the Big Five Inventory to classify students' personality traits, specifically introversion and extroversion and uses the Person-Environment Fit Theory to explain how well those traits match the university's social environment. The lower levels of social adjustment among introverted students suggest a weaker fit between their personality and the socially dynamic nature of university life, aligning with the theory's core idea. Similarly, the conceptual framework, which focuses on the relationship between personality traits and social adjustment outcomes, is also supported by these findings. It outlines how introversion can negatively impact social engagement and connection, which aligns with the observed difficulties introverted students may face in adapting to university settings.

This result is consistent with existing literature, which has frequently reported that introverted individuals tend to exhibit lower levels of social interaction (Battle & White, 2024), which may hinder the development of meaningful peer relationships and reduce participation in communal or academic group activities (Putri et. al., 2023). Such social behaviours are

central to successful adaptation within the university context, where students are expected to navigate complex social dynamics alongside academic demands.

According to Thomas and Nelson (2024), introverts possess higher levels of cortical arousal, making them more sensitive to environmental stimulation. This sensitivity may lead them to avoid socially intense situations, thereby reducing opportunities for social engagement and, in turn, lowering their level of social adjustment. Furthermore, introverted students may be more prone to internalising behaviours such as anxiety or withdrawal, which can further complicate their social adaptation process (Rahman, 2022).

From a practical standpoint, these findings suggest a need for higher education institutions to design support systems that specifically consider the needs of introverted students. Interventions such as peer mentoring, small group counselling, and structured social skills workshops could help these students gradually build their confidence and social competencies without overwhelming them in highly stimulating settings.

In conclusion, the strong negative correlation between introversion and social adjustment underscores the importance of personality in influencing students' social experiences at university. Addressing these differences through targeted support programs can enhance the overall well-being and retention of students who may struggle with social adaptation due to their personality disposition.

4.4.3 The Relationship Between Extroversion and Social Adjustment

Objective 3: To investigate the relationship between extroversion and social adjustment among undergraduate students.

The following hypothesis was formulated:

Null Hypothesis (H_0): There is no significant relationship between social adjustment and extroversion among undergraduate students.

Tests of Normality						
	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Sum_Extroversion	.466	201	.000	.541	201	.000
Sum_SocialAdjustment	.223	201	.000	.842	201	.000

a. Lilliefors Significance Correction

Table 4.4.3.1 Test of Normality for Extroversion and Social Adjustment

To begin, a normality check was performed using the Shapiro-Wilk test. The result was statistically significant ($p = .000$), indicating non-normality in the distribution. However, given the large sample size ($n = 201$), the use of Pearson's correlation is still justified, as it remains reliable in larger datasets even when normality is not perfectly met.

Correlations			
		Sum_Extroversion	Level of Social Adjustment
Sum_Extroversion	Pearson Correlation	1	.048
	Sig. (2-tailed)		.046
	N	201	201
Level of Social Adjustment	Pearson Correlation	.048	1
	Sig. (2-tailed)	.046	
	N	201	201

*. Correlation is significant at the 0.05 level (2-tailed).

Table 4.4.3.2 Pearson Correlation Between Extroversion and Social Adjustment

The analysis produced a weak but statistically significant positive correlation between extroversion and social adjustment ($r(199) = .048, p = .046$). In simpler terms, the more

extroverted a student is, the slightly more likely they are to report higher levels of social adjustment.

However, it's important to interpret this result with caution. Although the correlation is statistically significant, its strength is extremely low and almost negligible. The association exists, but it's so weak that it may not hold much real-world impact. Rejecting the null hypothesis here is more of a statistical formality than a strong practical conclusion.

This suggests that while extroversion may offer a small advantage in terms of social adjustment, it isn't a dominant factor on its own. Other variables such as emotional regulation, campus support systems, or cultural background may have a more substantial influence and warrant further investigation.

4.4.3.1 Discussion

The results of the Pearson correlation analysis revealed a statistically significant but very weak positive relationship between extroversion and social adjustment among undergraduate students ($r = .048, p = .046$). This indicates that while extroverted students tend to have slightly better social adjustment scores, the effect size is minimal and likely of limited practical significance.

The weak correlation suggests that extroversion alone may not be a strong predictor of how well students adapt socially in university settings. This finding aligns with prior research by Naidu et. al. (2022) indicating that although extroverts often seek social engagement and stimulation, these traits do not necessarily translate into substantially higher levels of social adjustment on their own. Social adjustment is a multifaceted construct influenced by various factors, including emotional intelligence, social support, coping strategies, and environmental conditions (Kayani et. al., 2022).

Additionally, the large sample size in this study might have contributed to detecting statistical significance despite the very small correlation coefficient. Researchers have cautioned against overinterpreting statistically significant results when effect sizes are trivial (Glaros, 2024). Therefore, while extroversion may provide some advantage in social adaptation, other individual differences and contextual factors likely play more pivotal roles.

These findings are supported by both the theoretical and conceptual frameworks underpinning the study. The results align with the theoretical framework, which uses the Big Five Inventory and the Person-Environment Fit Theory, by highlighting that although personality traits like extroversion may contribute to social adjustment, they are only one part of a broader picture. Likewise, the findings are consistent with the conceptual framework, which suggests that social adjustment outcomes are shaped not just by personality, but also by how well those traits interact with the surrounding environment and other personal resources. This alignment reinforces the importance of considering multiple variables when assessing students' social integration at university.

For university administrators and counsellors, this finding underscores the importance of adopting a holistic approach to student support rather than focusing solely on personality traits like extroversion. Programs aimed at enhancing social skills, fostering supportive peer networks, and encouraging resilience might be more impactful in promoting successful social adjustment.

4.4.4 Difference in Introversion and Extroversion on Social Adjustment

Objective 4: To investigate the significant difference between introversion and extroversion on social adjustment among undergraduate students.

The following hypothesis was formulated:

Null Hypothesis (H₀): There is no significant difference in social adjustment between introversion and extroversion undergraduate students.

Group Statistics					
	Introversion	Extroversion			Std. Error
	Group		N	Mean	Mean
AISSTotalScore	Extroversion		201	15.51	9.207
	Introversion		149	12.60	6.328

Table 4.4.4.1 Group Statistics for Social Adjustment by Extroversion and Introversion

Independent Samples Test									
		Levene's Test for Equality of Variances		t-test for Equality of Means					
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference Lower Upper
AISSTotalScore	Equal variances assumed	60.852	.000	3.320	348	.001	2.910	.877	1.186 4.634
	Equal variances not assumed			3.502	346.157	.001	2.910	.831	1.276 4.544

Table 4.4.4.2 Independent Samples T-Test for Social Adjustment between Introverts and Extroverts

As shown in Table 4.4.4.1, extroverted students reported a higher mean social adjustment score ($M = 15.51$, $SD = 9.21$) compared to introverted students ($M = 12.60$, $SD = 6.33$). The t-test results in Table 4.4.2.2 indicate that this difference was statistically significant, $t(348) = 3.32$, $p = .001$. The mean difference was 2.91 points.

Given that the p-value is less than the alpha level of .05, the null hypothesis is rejected. It can therefore be concluded that there is a significant difference in social adjustment between introverted and extroverted students, with extroverts demonstrating higher levels of social adjustment.

4.4.4.1 Discussion

The findings from the independent samples t-test revealed a significant difference in social adjustment between introverted and extroverted undergraduate students, with extroverts reporting significantly higher levels of social adjustment ($M = 15.51$, $SD = 9.21$) than their introverted counterparts ($M = 12.60$, $SD = 6.33$), $t(348) = 3.32$, $p = .001$. This result supports the alternative hypothesis and suggests that personality type, specifically extroversion, plays a meaningful role in the social adaptation process among university students.

These findings show that extroverted undergraduate students at UTS demonstrate higher levels of social adjustment. Extroverts, who are typically more sociable, outgoing, and comfortable in group settings, may find it easier to initiate conversations, build friendships, and participate in campus activities, which are key components of social adjustment. Their natural inclination toward social interaction likely enables them to integrate more quickly into the university environment, fostering a stronger sense of belonging and emotional well-being.

These findings align with existing literature that links extroversion to enhanced social functioning and interpersonal adaptability. Extroverts tend to be sociable, assertive, and outgoing, which facilitates smoother navigation of social environments such as university campuses (Subtinanda & Yuliana, 2023). As a result, extroverted students are more likely to engage in peer interactions, participate in extracurricular activities, and seek out support networks, which are positively associated with higher social adjustment.

In contrast, introverted individuals may experience more difficulty adjusting to new social contexts due to their reserved nature and lower levels of social engagement. While not inherently maladaptive, introversion can limit the frequency and intensity of social interactions, potentially leading to lower perceived social support and greater adjustment challenges (Saputera et. al., 2024). The lower mean score for introverts in this study may reflect such challenges in navigating university life, especially in socially demanding environments.

These findings have practical implications for university counselling and student support services. Recognising that introverted students may require more structured or individualised support to foster social connections can inform the development of tailored orientation programs, peer mentoring, or small group activities aimed at easing their adjustment process.

Additionally, these findings are supported by both the theoretical and conceptual frameworks guiding this study. According to the theoretical framework, which incorporates the Big Five Inventory and the Person-Environment Fit Theory, students whose personality traits align with the social characteristics of the university environment are more likely to adjust successfully. Extroverted students, who naturally seek out social interaction and engagement, are better matched to the socially dynamic nature of university life, leading to more positive adjustment outcomes. This supports the idea that a strong person-environment fit contributes to smoother social adjustment. The findings also reflect the conceptual framework. The observed pattern, where extroverts show higher levels of adjustment, directly supports the framework's prediction that personality significantly shapes students' social experiences and their ability to adjust to the university setting.

Overall, the analysis supports the view that personality traits significantly influence students' adjustment trajectories. While extroverts appear to benefit more naturally from the social opportunities of university life, targeted interventions may be needed to ensure introverted students are equally supported in their adjustment process.

4.5 Summary

This chapter presented the findings and discussion of the study examining the relationship between introversion, extroversion, and social adjustment among undergraduate students, based on a sample of 351 participants. Descriptive statistics were used to summarise key demographic characteristics such as gender, age, year of study, and schools. Inferential statistical analyses, including the One Sample T-test, Independent Samples T-test, and Pearson's correlation, were employed to test the study's hypotheses. The One Sample T-test revealed that students reported a slightly above-average and statistically significant level of social adjustment. The Independent Samples T-test showed that extroverted students had higher levels of social adjustment compared to introverted students. However, Pearson's correlation indicated a statistically significant but very weak positive relationship between extroversion and social adjustment, suggesting that personality traits alone do not strongly predict social adaptation. These findings are consistent with both the theoretical framework, which incorporates the Big Five Inventory and Person-Environment Fit Theory, and the conceptual framework, which explores how personality traits influence students' social adjustment. Overall, the results highlight that while personality plays a role, social adjustment is influenced by a combination of individual traits and broader environmental factors.

CHAPTER 5

CONCLUSION AND RECOMMENDATIONS

5.0 Introduction

This chapter presents the conclusion drawn from the study findings and offers theoretical, conceptual, and practical recommendations. It also outlines the limitations of the study and provides directions for future research and intervention.

5.1 Overview of the Study

This study aimed to explore how personality traits, specifically introversion and extroversion, relate to social adjustment among undergraduate students at University Technology of Sarawak. Social adjustment plays a vital role in a student's overall university experience, influencing their academic success, emotional well-being, and ability to form social connections. Understanding how personality affects this adjustment can help educators and student support services develop more targeted and effective strategies.

A quantitative research approach was used, involving a total of 351 undergraduate students from various faculties. The research instrument included two main components: a personality assessment based on the Big Five Personality Inventory to measure introversion and extroversion, and a social adjustment scale to evaluate how well students were adapting to the social aspects of university life. Descriptive statistics were used to summarise participant demographics, while inferential statistical tests were employed to examine relationships and differences between variables. These tests included the One Sample t test, Independent Samples t test, and Pearson correlation analysis.

The study explored four core areas: (1) the overall level of social adjustment among undergraduate students, (2) the difference in social adjustment levels between students with varying levels of introversion and extroversion, (3) the relationship between introversion and social adjustment, and (4) the relationship between extroversion and social adjustment.

Key findings revealed that students reported a slightly above average level of social adjustment. Extroverted students tended to show higher levels of social adjustment compared to their introverted peers. A significant negative relationship was identified between introversion and social adjustment, indicating that more introverted students may find it more

challenging to adapt socially. A very weak but statistically significant positive relationship was found between extroversion and social adjustment, suggesting that while extroversion may offer some advantage, it is not a strong predictor of social adjustment on its own.

Overall, the study contributes to the understanding of how personality traits can influence students' social experiences in higher education and supports the application of the Big Five Personality framework and the Person Environment Fit Theory in this context.

5.2 Conclusion of Findings

This section summarises the key findings from the analysis and links them back to the main research objectives. The conclusions provide a clearer understanding of how undergraduate students at University Technology of Sarawak adjust socially, and how personality traits such as introversion and extroversion contribute to this adjustment. By examining both group-level differences and the strength of relationships between variables, the study offers a nuanced picture of the connection between personality and social integration in the university context.

5.2.1 The Level of Social Adjustment Difference in Undergraduate Students on Social Adjustment

This study found that, on average, undergraduate students at University Technology of Sarawak had a slightly above-average level of social adjustment. This means that most students feel they are doing fairly well in fitting into the university's social environment. Many of them seem to find it easy to make friends, join campus activities, and feel a sense of belonging with their classmates and peers. A good level of social adjustment usually shows that students are comfortable interacting with others and are able to handle the social side of university life.

However, the results also showed that not all students have the same level of social adjustment. Some students reported lower or unsatisfactory levels, which means they might be facing challenges in building relationships or feeling comfortable in social settings. This shows that social adjustment is not the same for everyone. While many students are doing well, others may be struggling. Because of this, the university may need to offer more support, such as mentoring programs, student clubs, or counseling services, to help students who are having a harder time adjusting socially.

These findings are similar to the study by Davydenko et. al. (2020) in the literature review chapter 2. Their study showed that extroverted students usually adjust better socially and feel more satisfied with their lives when they start college. This is because extroverts often enjoy talking to people and making new friends. On the other hand, introverted students may take longer to adjust, but over time, they might form deeper and more meaningful friendships. This means that social adjustment can happen in different ways depending on a student's personality.

Another study by Lun et. al. (2020) also supports these ideas. They found that students who are more adaptable and open to change have an easier time with social adjustment. Their research also showed that personality traits like being outgoing or emotionally stable, as well as having good social support, can help students adjust better. Adaptability played a big role in helping students connect their personality traits to their level of social adjustment. This means students who can adjust to new situations more easily are often better at handling social life in school.

Overall, this study adds to existing research that shows social adjustment in university is a complex and personal experience. While many students at University Technology of Sarawak seem to adjust well socially, there are still some students who struggle with lower levels of social adjustment. This shows that universities need to provide better and more inclusive support services for all students. By understanding how personality and adaptability affect social adjustment, universities can create more helpful and personalised ways to support students as they adjust to university life.

5.2.2 Relationship Between Introversion and Social Adjustment

The analysis revealed a statistically significant negative correlation between introversion and social adjustment. This means that as levels of introversion increase, levels of social adjustment tend to decrease. The strength of this relationship suggests that being more introverted may serve as a potential barrier to certain aspects of adapting socially within the university environment.

Introverted students are generally less inclined to actively participate in group discussions, join extracurricular activities, or initiate new social connections. Their preference for solitude or interaction within smaller, familiar groups may limit their opportunities to

engage with the wider campus community. As a result, it may be more difficult for them to build strong peer relationships or develop a sense of inclusion and belonging. These limitations in social participation can contribute to lower levels of social adjustment, particularly during the initial phases of university life.

This finding is consistent with the principles of the Person-Environment Fit Theory, as discussed in chapter 1, which proposes that a mismatch between an individual's personality traits and the demands or characteristics of their environment can negatively impact outcomes such as satisfaction, wellbeing, or adjustment. In the context of higher education, students with higher levels of introversion may find it more challenging to navigate the socially dynamic nature of university life (Shahzadi et. al., 2024). Recognising this dynamic is crucial for institutions aiming to create supportive environments that address the diverse needs of students with varying personality profiles.

5.2.3 Relationship Between Extroversion and Social Adjustment

The analysis revealed a very weak yet statistically significant positive correlation between extroversion and social adjustment. This finding suggests that extroverted students may have a slight advantage in adapting to the university's social environment. However, the strength of this relationship is minimal, indicating that extroversion alone does not serve as a major predictor of social adjustment. While students who are more sociable and outgoing may find it easier to initiate conversations and participate in group activities, the influence of this personality trait on overall social adjustment is limited.

The small effect size further supports the view that social adjustment is influenced by a range of interrelated factors beyond personality traits. These may include emotional resilience, mental health, cultural background, the quality of peer relationships, and the level of access to support services provided by the institution. Therefore, it is essential to interpret the statistical significance of this relationship with caution. In studies involving larger samples, even weak correlations can appear statistically significant, which does not necessarily translate to meaningful practical implications.

This result is also supported by the findings of Chizhkova (2022), which emphasized that extroverts tend to report higher levels of social adjustment and life satisfaction during the initial stages of university. However, their study also highlighted that other factors play an

equally important role in the long-term process of social adjustment. This includes how students interact with their environment over time, the support they receive, and how well their personality aligns with their social surroundings.

While extroversion appears to be associated with social adjustment to a small extent, the relationship is not strong enough to suggest that extroversion is the primary or sole factor influencing social outcomes among university students. These findings underscore the importance of considering a more holistic framework when examining student social adjustment, which takes into account both internal traits and external support systems.

5.2.4 Differences in Introversion and Extroversion on Social Adjustment

When examining social adjustment among students with differing personality traits, the results indicated that extroverted students demonstrated significantly higher levels of social adjustment compared to their introverted peers. Extroverted individuals are typically characterized by sociability, assertiveness, and comfort in group settings, which can facilitate easier participation in campus events, classroom discussions, and peer interactions. These qualities may naturally support smoother transitions into university life, contributing to a stronger sense of social belonging.

In contrast, introverted students may face greater challenges in navigating the social environment of university life. Often preferring solitude, reflection, or small-group interactions, introverts might find large social gatherings or unfamiliar settings mentally draining or overwhelming. As a result, their process of developing social networks and adjusting to new social norms may be slower and more effortful. While the difference in social adjustment between extroverts and introverts was not highly pronounced, it was statistically significant and supports longstanding psychological theories that associate extroversion with greater ease in social engagement and environmental adaptation.

These findings are consistent with prior research in chapter 2, such as Wang and Sheibani (2024), who also observed that extroverts generally report higher levels of social adjustment and life satisfaction during the early phases of college. However, their study also emphasized that introverts may develop deeper, more meaningful relationships over time, suggesting that while their initial social adjustment may lag, their long-term integration could still be strong. This nuanced understanding highlights the need for universities to support both

personality types through diverse social opportunities and environments that cater to different social comfort levels.

5.3 Theoretical and Conceptual Implications

The results of this study align well with the theoretical and conceptual frameworks that guided the research. The Big Five Personality Inventory served as the foundation for identifying and measuring personality traits, specifically introversion and extroversion, while the Person–Environment Fit Theory was used to assess how well these traits influence social adjustment within the university setting. Together, these frameworks helped to explain the observed relationships between personality and social adaptation. Additionally, the conceptual framework proposed that personality traits directly impact students' ability to adjust socially, an idea largely supported by the data, though the effect sizes suggest that personality is only one part of a broader, more complex process.

Alignment with Finding 1: The Level of Social Adjustment in Undergraduate Students

The generally above-average level of social adjustment observed among students can be understood using the Person–Environment Fit Theory. This theory explains that when students' personal traits match the social and academic expectations of their surroundings, they are more likely to experience positive outcomes such as better adjustment (Aldridge et. al., 2024). Although this study did not measure person–environment fit directly, the high overall adjustment scores suggest that many students at University Technology of Sarawak (UTS) find the university environment supportive of their social needs. The campus likely offers enough opportunities for students to interact, form friendships, and feel a sense of belonging. This kind of environment may suit different personality types, especially those that are well matched to the university's social culture and expectations.

This interpretation agrees with previous research that highlights the importance of a welcoming and supportive campus setting in helping students adjust socially. A study by Onal and Biricik (2025) emphasised that students are more likely to succeed socially when their environment encourages interaction and connection. According to Shofia and Syukur (2024), students with extroverted traits tend to adjust more easily because they are more comfortable engaging with others. However, when the university environment is inclusive and flexible, even students who are more introverted or reserved can still achieve positive social adjustment. Therefore, the overall high adjustment levels found in this study indirectly support the idea that

a good match between students and their environment plays an important role in their ability to adjust socially, even though personality traits were not the main focus of this particular result.

Alignment with Finding 2: Relationship Between Introversion and Social Adjustment

The significant negative correlation between introversion and social adjustment supports both the Big Five Personality Framework and the Person–Environment Fit Theory. According to Costa and McCrae (1992), people who are more introverted are usually quiet, reflective, and less likely to seek out social activities. These characteristics can make it more difficult for them to adjust socially in university, where building relationships and taking part in group events are often important.

The Person–Environment Fit Theory also helps to explain this result. According to Nisa and Mirawati (2022), students are more likely to feel comfortable and adjust well when their personal traits match the environment around them. For introverted students, the busy and socially active nature of university life might feel overwhelming or uncomfortable, leading to lower levels of social adjustment.

This finding supports the idea that how well a student fits with their environment can strongly affect their social experience. As explained by Stark et. al. (2024), when students' personalities are in harmony with what their surroundings expect or encourage, they are more likely to adjust successfully. In contrast, when there is a mismatch such as an introverted student in a highly social setting, adjustment becomes more difficult. This shows how important it is for universities to understand and support different personality types to help all students adjust socially.

Alignment with Finding 3: Relationship Between Extroversion and Social Adjustment

Although the correlation between extroversion and social adjustment was statistically significant, it was very weak in strength. This suggests that while extroversion has a positive influence on social adjustment, it is not a strong or dominant factor by itself. Extroverted individuals are typically more sociable, outgoing, and active in group settings, which can support easier adjustment in social environments like university. However, the weak relationship found in this study indicates that other personality traits or external influences may also play important roles in shaping how well students adjust socially.

This finding partly supports the Big Five Personality Framework, which highlights that extroversion is linked to higher social engagement, but it also suggests that focusing only on extroversion may overlook other meaningful influences. For example, emotional intelligence and coping strategies have been shown to significantly affect social adjustment, and institutional factors such as peer support and campus inclusiveness may also be important (Cioca et. al., 2024).

The Person–Environment Fit Theory also remains useful in interpreting this result. According to Holliman et al. (2022), even if a student’s personality seems to match the environment, this does not always result in high adjustment if other support systems or social conditions are missing. Therefore, the weak correlation found here shows that the match between personality and environment alone is not enough. This also suggests that the study’s conceptual framework could be expanded to include additional factors beyond personality, in order to better understand the full range of influences on social adjustment.

Alignment with Finding 4: Differences in Introversion and Extroversion on Social Adjustment

The finding that extroverted students reported higher levels of social adjustment is consistent with the principles of the Big Five Personality Inventory. Extroverted individuals tend to be sociable, assertive, and energetic, which supports their tendency to actively engage in social interactions. These characteristics make it easier for them to form peer relationships, participate in group activities, and integrate into social settings, all of which are key indicators of successful social adjustment in a university environment.

In contrast, introverted students, who are typically more reserved and inward-focused, may find it more difficult to navigate the socially demanding aspects of university life. According to Jusri and Lechner (2024), extroverts generally experience higher levels of social adjustment and life satisfaction during early university stages, while introverts may adjust more slowly. This suggests that personality differences can influence the ease and pace at which students adapt socially.

This finding is also in line with the Person–Environment Fit Theory, which suggests that better adjustment occurs when there is a match between an individual's personal attributes and the characteristics of their environment. Extroverted students may experience a stronger fit within

the socially dynamic nature of higher education, which promotes higher levels of social adjustment. Furthermore, as explained by Ringwald et. al. (2025), students are more likely to succeed and feel satisfied in academic and social settings that align with their dispositional tendencies.

Overall, this finding supports the study's conceptual framework, which predicted that personality traits, particularly extroversion, would influence social adjustment outcomes. It confirms that personality plays a key role in shaping how well students integrate into the social aspects of university life.

In conclusion, the findings of this study largely support both the theoretical and conceptual foundations of the research. Personality traits, particularly introversion and extroversion, do influence how well students adapt socially, but these traits are part of a more complex system of interactions between individual characteristics and environmental conditions. Future theoretical models and conceptual frameworks should adopt a more holistic approach, considering additional psychological, social, and environmental factors to better explain and support students' social adjustment.

5.4 Limitations of the Study

While this study provides valuable insights into the relationship between personality traits and social adjustment among undergraduate students at University Technology of Sarawak, several limitations should be acknowledged. These limitations provide important context for interpreting the results and identifying areas for future research improvement.

5.4.1 Reliance on Self-Reported Data

One of the primary limitations of this study is its reliance on self-reported questionnaire data. Self-report measures can be influenced by social desirability bias, where respondents may answer questions in a manner they believe is socially acceptable or favorable, rather than providing entirely honest responses. Additionally, self-assessments may not always reflect accurate self-perceptions, as participants might misunderstand certain items or overestimate or underestimate their traits and behaviors. This introduces a level of subjectivity and potential inaccuracy that may impact the validity of the findings.

5.4.2 Limited Generalisability

The research was conducted solely at University Technology of Sarawak (UTS), which limits the generalisability of the findings. Cultural, institutional, and environmental factors unique to UTS may have influenced the results, meaning that the findings may not apply to students in other universities, regions, or countries. Broader generalisations to the undergraduate student population as a whole should therefore be made with caution. Future studies involving multiple institutions across diverse geographic and cultural settings would be necessary to improve generalisability.

5.4.3 Narrow Focus on Two Personality Traits

This study exclusively focused on introversion and extroversion, which, while relevant, represent only two dimensions of the broader Big Five Personality traits. Other personality factors such as agreeableness, conscientiousness, openness to experience, and emotional stability may also play significant roles in influencing social adjustment. By not accounting for these additional traits, the study offers only a partial view of how personality impacts students' social functioning. As a result, some potentially influential variables that could enrich understanding of social adjustment may have been overlooked.

5.4.4 Use of Quantitative Methods Only

The study employed a quantitative research design, using statistical tools to measure relationships and differences. While this approach is effective for identifying patterns and general trends, it may not capture the nuanced, subjective experiences of students' social adjustment. Social adjustment is a complex and multidimensional process, often shaped by personal narratives, emotional coping mechanisms, and interpersonal dynamics, which are better explored through qualitative methods such as interviews or focus groups. The absence of qualitative data limits the depth of interpretation and may oversimplify students' lived experiences.

5.4.5 Cross-Sectional Design

Another limitation is the cross-sectional nature of the study, which captures data at a single point in time. This design does not allow for the assessment of causality or changes in social adjustment over time. For example, a student's level of adjustment may vary between

their first and final years at university. Longitudinal studies would offer a more comprehensive understanding of how personality traits influence social adjustment across different stages of the academic journey.

5.5 Recommendations

This section presents a series of recommendations based on the findings, theoretical implications, and limitations identified in the current study. The recommendations are organized into two main areas. The first section offers suggestions for future research, while the second focuses on practical interventions that can be implemented in university settings, particularly through counselling and student support services.

5.5.1 Recommendations for Future Research

Future studies should consider exploring a broader range of personality traits beyond introversion and extroversion, such as emotional stability and agreeableness, to gain a more complete understanding of their impact on social adjustment. Additionally, using a mixed-methods approach that includes interviews or focus groups could provide deeper insights into students' personal experiences. Research involving students from different universities or cultural backgrounds is also recommended to improve generalisability and explore how different environments influence social adjustment.

5.5.1.1 Broaden the Scope of Personality Traits Studied

Future research is encouraged to examine a wider range of personality traits beyond introversion and extroversion. Other major traits within the Big Five Personality model, such as emotional stability, agreeableness, conscientiousness, and openness to experience, may also significantly influence students' social adjustment. For instance, students who are emotionally stable may handle interpersonal stress more effectively, while those high in agreeableness may form social bonds more easily. Including these additional traits in future studies would provide a more comprehensive understanding of how personality shapes social outcomes in higher education environments.

5.5.1.2 Adopt Mixed-Methods Approaches

While this study utilized quantitative analysis to draw general trends, future researchers may benefit from adopting mixed-methods designs that combine both quantitative and

qualitative approaches. For example, incorporating semi-structured interviews or focus group discussions could offer deeper insight into how students experience social adjustment in everyday life. This approach would allow researchers to capture nuanced experiences, motivations, and barriers that may not be fully reflected in numerical data. It may also help uncover how personality traits interact with cultural norms, family background, and personal values in shaping social behavior.

5.5.1.3 Conduct Cross-Cultural and Cross-Institutional Comparisons

Since this study was limited to students at University Technology of Sarawak, future studies should aim to include participants from multiple universities and diverse cultural backgrounds. Such comparative research could reveal important differences in how personality influences social adjustment across different institutional types and cultural settings. For example, the experience of an introverted student at a small university in Malaysia might differ significantly from that of a similar student in a large, urban institution in another country. Understanding these differences would enhance the generalisability of research findings and inform context-specific interventions.

5.5.1.4 Explore Mediating and Moderating Factors

The current study focused on the direct relationship between personality traits and social adjustment. However, future research could explore factors that mediate or moderate this relationship. For example, variables such as emotional intelligence, level of social support, prior school experiences, or involvement in extracurricular activities may strengthen or weaken the impact of personality traits on adjustment. By identifying these variables, future studies could build more complex models that better explain the dynamics of social integration in university contexts.

5.5.2 Recommendations for Counselling Field Intervention

The findings of this study suggest that while personality traits play a role in social adjustment, they are not the sole determinants. Therefore, interventions should be designed to support students across the personality spectrum, particularly those who may face challenges in adapting to the social environment of university life.

5.5.2.1 Promoting Awareness of Person and Environment Fit

Universities should consider introducing awareness programs that help students understand the concept of person and environment fit. This involves educating students on how their individual personality traits can influence their interactions with the social and academic environment. For instance, during orientation week or in foundation courses, students could be guided through reflective exercises or short assessments that help them recognize their own traits and learn strategies for navigating the university environment more effectively. By fostering this awareness early in their academic journey, students may be better prepared to manage social challenges and seek out opportunities that align with their natural preferences.

5.5.2.2 Implementing Personality-Based Support Systems

University counselling and student affairs offices should consider integrating personality assessments into their support frameworks. For example, brief, voluntary questionnaires based on the Big Five Personality model can be used to help counsellors and advisors understand each student's needs and challenges. These assessments can inform personalized support plans that are sensitive to the individual's social tendencies. An introverted student might benefit from being placed in a peer mentoring program with smaller, more intimate settings, while an extroverted student may thrive in group-based activities or leadership development initiatives. Such tailored support would ensure that resources are used efficiently and that students receive interventions that match their personality profiles.

5.5.2.3 Delivering Psychoeducation Workshops on Social Skills

Many students enter university without formal training in social communication or adjustment strategies. Therefore, institutions should offer regular psychoeducational workshops that address key social skills. Topics may include how to build and maintain friendships, manage conflict, cope with social anxiety, and engage in effective communication. These workshops should be interactive and practice-oriented, offering role-play, group discussions, and case scenarios. For example, a session could include tips for initiating conversations in class or networking during campus events. Providing such skills not only benefits introverted students who may struggle with social interaction, but also helps extroverted students refine their ability to navigate different social contexts appropriately.

5.5.2.4 Establishing and Strengthening Peer Mentoring Programs

Peer mentoring programs can be an effective way to help students adjust socially, especially during their first year of study. Universities should consider pairing new students with trained peer mentors who can provide guidance, support, and encouragement. These programs can be especially beneficial for students who are shy, anxious, or lacking confidence in their social abilities. Regular check-ins between mentors and mentees, social events, and structured activities can create safe spaces for students to build their confidence and expand their social networks. This not only enhances individual adjustment but also contributes to a more inclusive and supportive campus culture.

5.5.2.5 Encouraging Collaboration Between Academic and Support Staff

Finally, greater collaboration between academic departments and student support services can improve the identification and support of students struggling with social adjustment. Lecturers and tutors are often in a position to observe students' engagement levels and interpersonal behavior. By training faculty members to recognize signs of social withdrawal or distress, and to refer students to appropriate support services, universities can adopt a more proactive and preventative approach. Furthermore, integrating social development components into classroom activities or group projects can offer additional opportunities for students to build connections in an academic setting.

5.6 Conclusion

Understanding the factors that influence students' social adjustment is critical for creating a university environment where all individuals can thrive both academically and socially. The transition into higher education often presents students with new social landscapes that require effective interpersonal skills, emotional resilience, and adaptability. This study explored how personality traits, specifically introversion and extroversion, relate to social adjustment among undergraduate students at the University Technology of Sarawak. The findings revealed nuanced relationships, showing that while personality plays a role, it is only one part of a much larger and more complex picture.

The results indicated a slightly above-average level of social adjustment among the student population overall, suggesting that most students are managing to adapt well to university life. However, the data also highlighted some differences based on personality traits.

Extroverted students tended to show higher levels of social adjustment compared to their introverted peers, although the effect was weak. Introversion was found to have a stronger negative correlation with social adjustment, implying that students who are more introverted may face greater challenges when it comes to engaging socially in the university environment.

These findings support the theoretical foundation of the study, which drew upon the Big Five Personality framework and the Person–Environment Fit theory. The results align with the idea that personality influences how well individuals fit into their social context. However, the weak correlations observed also suggest that personality alone does not determine success in social adjustment. Other factors such as social support systems, emotional intelligence, cultural background, and institutional resources, are likely to have a significant impact. This underscores the importance of developing a more holistic view of student adjustment that goes beyond personality traits alone.

In conclusion, while this study has shed light on the relationship between personality and social adjustment, it also points to the need for further investigation into additional factors that contribute to students' social well-being. Universities should recognise that social adjustment is a multifaceted experience shaped by both internal traits and external support systems. Therefore, student development strategies should be inclusive, proactive, and adaptable to meet the needs of a diverse student body. By promoting environments that support both introverted and extroverted students, institutions can help ensure that all learners feel a sense of belonging and are equipped to succeed socially and academically.

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APPENDIX A: QUESTIONNAIRE

Informed Consent Form

Dear Participant,

My name is Tsai Jia Hui and I am a Year 3 Counselling student at University Malaysia Sarawak (UNIMAS). I am conducting a study on **The Relationship Between Introversion and Extroversion on Social Adjustment Among Undergraduate Students**. I would like to invite you to take part in this study.

This questionnaire consists of three sections:

- **Section A: Demographic Information**
- **Section B: Introversion Scale by McCroskey**
- **Section C: Social Adjustment Scale (AISS)**

There are no risks involved in participating, and no payment will be provided. All the information you share will be kept confidential and used solely for academic purposes.

Your participation is completely **VOLUNTARY**. You may choose not to participate or withdraw at any time without any consequences. However, your input is highly valuable in helping us understand how personality traits influence social adjustment among undergraduate students.

By completing this questionnaire, you agree to take part in this study. Please answer the questions honestly to ensure the accuracy and reliability of the research findings.

Thank you very much for your time and support. Your participation is truly appreciated.

Do you willingly consent to participate in this research study, titled "*The Relationship of Introversion and Extroversion on Social Adjustment Among Undergraduate Students in University*," with the assurance that your responses will remain confidential and be used exclusively for academic purposes?

- ☐ Yes, I agree to participate.
- ☐ No, I do not agree to participate.

SECTION A: DEMOGRAPHIC INFORMATION

This section gathers fundamental background information about participants, including gender, age, race, year of study, and faculty. The collected data will assist in examining the connection between time management skills and emotional well-being among undergraduate students. All responses will be kept confidential and used exclusively for academic purposes.

Gender

- ☐ Male
- ☐ Female

Age

- ☐ 18-21
- ☐ 22-25
- ☐ 25 and above

Race

- ☐ Malay
- ☐ Chinese
- ☐ Indian
- ☐ Iban
- ☐ Others

Year of Study

- ☐ Year 1
- ☐ Year 2
- ☐ Year 3
- ☐ Year 4
- ☐ Year 5 (Extended Program)

School

- ☐ School of Engineering and Technology
- ☐ School of Business and Management
- ☐ School of Built Environment
- ☐ School of Computing and Creative Media

SECTION B: Introversion Scale by McCroskey

This section utilises the **Introversion Scale by McCroskey** to assess your level of introversion. Below are **18 statements** that reflect how people may perceive themselves. Please indicate the extent to which each statement applies to you by selecting the number that best represents your typical behaviour, using the following scale:

Strongly Disagree = 1

Disagree = 2

Undecided = 3

Agree = 4

Strongly Agree = 5

Kindly respond honestly to ensure accurate and meaningful results.

BAHAGIAN B: Introversion Scale by McCroskey

Bahagian ini menggunakan **Introversion Scale by McCroskey** untuk menilai tahap introversi anda. Di bawah ialah **18 pernyataan** yang menggambarkan bagaimana orang mungkin menganggap diri mereka sendiri. Sila nyatakan sejauh mana setiap pernyataan terpakai kepada anda dengan memilih nombor yang paling mewakili tingkah laku biasa anda, menggunakan skala berikut:

Sangat Tidak Setuju = 1

Tidak setuju = 2

Tidak pasti = 3

Setuju = 4

Sangat Setuju = 5

Sila balas dengan jujur untuk memastikan hasil yang tepat dan bermakna.

1. Do you prefer to stay quiet in social events?
Adakah anda lebih suka berdiam diri dalam majlis sosial?
2. Do you like to mix socially with people?
Adakah anda suka bergaul dengan orang lain?
3. Do you sometimes feel happy, sometimes depressed, without any apparent reason?
Adakah anda kadang-kadang berasa gembira, kadang-kadang murung tanpa sebab yang jelas?
4. Do you prefer to have a small number of friends?
Adakah anda lebih suka mempunyai sedikit kawan?
5. Do you like to have many social engagements?
Adakah anda suka mempunyai banyak komitmen sosial?
6. Do you have frequent ups and downs (unstable) in your mood?
Adakah mood anda sering berubah-ubah (tidak stabil)?
7. Would you rate yourself as a happy-go-lucky individual?
Adakah anda menganggap diri anda seorang yang periang dan tidak terlalu serius?
8. Can you usually let yourself go and have a good time at a party?
Bolehkah anda biasanya bersantai dan berseronok di pesta?
9. Do you often feel moody?
Adakah anda sering berasa murung atau berubah-ubah mood?
10. Would you be very unhappy if you were prevented from making numerous social contacts?
Adakah anda akan berasa sangat tidak gembira jika tidak boleh berinteraksi dengan ramai orang?
11. Do you usually take the initiative in making new friends?

Adakah anda biasanya mengambil inisiatif untuk berkawan dengan orang baru?

12. Does your mind often wander while you are trying to concentrate?

Adakah fikiran anda sering mengembara ketika cuba menumpukan perhatian?

13. Do you like to play pranks upon others?

Adakah anda suka bermain-main atau menggoda orang lain?

14. Are you usually a "good mixer"?

Adakah anda biasanya mudah mesra dan disukai dalam pergaulan?

15. Are you sometimes bubbling over with energy and sometimes very sluggish?

Adakah anda kadang-kadang penuh tenaga dan kadang-kadang sangat lesu?

16. Do you often "have the time of your life" at social affairs?

Adakah anda sering "berseronok sepenuhnya" dalam majlis sosial?

17. Are you frequently "lost in thought" even when you should be taking part in a conversation?

Adakah anda sering "hilang dalam fikiran" walaupun sepatutnya terlibat dalam perbualan?

18. Do you derive more satisfaction from social activities than from anything else?

Adakah anda mendapat lebih kepuasan dari aktiviti sosial berbanding perkara lain?

SECTION C: Adjustment Inventory for School Students (AISS)

This section evaluates your social adjustment using the **Adjustment Inventory for School Students (AISS)**. It consists of **20 questions** related to different aspects of social adaptation. You will indicate how frequently each statement applies to you by selecting one of the following options:

Always = 1

Sometimes = 2

Never = 3

Your responses will help assess social adjustment and its relationship with introversion and extroversion.

BAHAGIAN C: Adjustment Inventory for School Students (AISS)

Bahagian ini menilai pelarasan sosial anda menggunakan **Adjustment Inventory for School Students (AISS)**. Ia terdiri daripada **20 soalan** yang berkaitan dengan pelbagai aspek penyesuaian sosial. Anda akan menunjukkan kekerapan setiap pernyataan terpakai kepada anda dengan memilih salah satu daripada pilihan berikut:

Sentiasa = 1

Kadang-kadang = 2

Tidak pernah = 3

Respons anda akan membantu menilai pelarasan sosial dan hubungannya dengan introversi dan ekstroversi.

1. Do you avoid meeting your classmates?
Adakah anda mengelak daripada berjumpa rakan sekelas?
2. Are you naturally shy in social situations?
Adakah anda secara semula jadi pemalu dalam situasi sosial?
3. Do you hesitate to ask a question when you don't understand something?
Adakah anda ragu-ragu untuk bertanya apabila tidak memahami sesuatu?
4. Do you feel comfortable approaching your lecturers for discussions?
Adakah anda selesa mendekati pensyarah untuk berbincang?
5. Do you sometimes feel like you have no friends in your university?
Adakah anda kadang-kadang rasa seperti tiada kawan di universiti?
6. When some students are talking together, do you join them freely?
Apabila beberapa pelajar sedang berbual, adakah anda menyertai mereka dengan bebas?
7. Do you like to join your classmates working together?
Adakah anda suka menyertai rakan sekelas bekerja bersama?
8. Do you try to attract the attention of your lecturer to yourself in the class? Adakah anda cuba menarik perhatian pensyarah kepada diri anda dalam kelas?
9. Do you often like to be alone?
Adakah anda sering suka bersendirian?
10. Do you like to sit in the front seats in the class?
Adakah anda suka duduk di barisan hadapan dalam kelas?
11. Do you have a friendly association with your classmates?
Adakah anda mempunyai hubungan yang mesra dengan rakan sekelas?

12. Do you take part in university sports or extracurricular activities?

Adakah anda mengambil bahagian dalam sukan atau aktiviti kokurikulum universiti?

13. Are you shy to talk to your seniors?

Adakah anda malu untuk bercakap dengan senior anda?

14. Do you have some intimate/close friends at your university?

Adakah anda mempunyai beberapa rakan akrab di universiti?

15. Are you always ready to help your classmates in every way?

Adakah anda sentiasa bersedia membantu rakan sekelas dalam apa jua cara?

16. Do you gladly lend your books or notes when your classmates ask?

Adakah anda dengan senang hati meminjamkan buku atau nota apabila rakan sekelas meminta?

APPENDIX B: GOOGLE FORM LINK

Pilot Study

Pilot Study Participation Request

I am Tsai Jia Hui (87059), a final year Counseling student at Universiti Malaysia Sarawak (UNIMAS), currently conducting a pilot study titled “*The Relationship of Introversion and Extroversion on Social Adjustment Among Undergraduate Students in University.*”

I kindly invite you to participate in this pilot survey by clicking the link below:

 <https://forms.gle/yxVWMozaTGf4enBM6>

The survey will take approximately 10 minutes to complete. All responses are strictly confidential and used solely for academic purposes.

For any inquiries, please feel free to contact me at: 87059@siswa.unimas.my

Thank you very much for your time and support.

Final Data Collection

Final Year Project Participation Request

I am Tsai Jia Hui (87059), a final year Counseling student at Universiti Malaysia Sarawak (UNIMAS), currently conducting a research study titled “*The Relationship of Introversion and Extroversion on Social Adjustment Among Undergraduate Students in University.*”

I am inviting **undergraduate students from University of Technology Sarawak (UTS)** to participate in this study by completing a short online survey.

 <https://forms.gle/yxVWMozaTGf4enBM6>

The survey will take approximately 10 minutes to complete. All responses are strictly confidential and used solely for academic purposes.

For any inquiries, please feel free to contact me at: 87059@siswa.unimas.my

Thank you very much for your time and support.