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The Role of Mindfulness Practices in Developing Emotional Intelligence Among University Students: A Neuroleadership Perspective

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Abstract

Background:
Mindfulness practices have been increasingly associated with emotional regulation and self-awareness in higher education contexts. However, limited research has examined their relationship with emotional intelligence among university students using a Neuroleadership perspective. This study explored whether participation in an eight-week mindfulness program was associated with changes in emotional intelligence among undergraduate students.

Methods:
A pre–post mixed-methods design was employed with a sample of 30 undergraduate business students enrolled at Bangkok School of Management, including students affiliated with Northumbria University and EBS Paris. Participants completed an eight-week mindfulness program developed by the UCLA Mindful Awareness Research Center. Quantitative data were collected using validated self-report measures administered before and after the intervention. Data were analyzed using paired t-tests to examine pre–post differences. Qualitative reflections were analyzed using thematic analysis to identify recurring patterns related to emotional awareness and regulation.

Results:
Quantitative findings indicated statistically significant improvements in selected dimensions of emotional intelligence following the intervention. Qualitative themes suggested increased self-awareness, improved emotional regulation, and greater reflective capacity among participants. While improvements were observed across both online and offline learners, findings indicate associations rather than causal effects due to the study design and sample size.

Conclusion:
The findings revealed that mindfulness practices are associated with the development of emotional intelligence among university students. Interpreted through a Neuroleadership perspective, the findings highlight the potential relevance of mindfulness-based approaches in supporting students' emotional awareness and adaptive functioning in academic settings.

Keywords: Education, Mindful Leadership, Mindfulness Practices, Business Students, Neuroleadership, Emotional Intelligence

Chapter 1

Introduction

1.1 Background

Emotional intelligence (EI) has been widely recognized as a critical competency for university students, influencing emotional regulation, interpersonal relationships, and adaptive decision-making in academic settings. EI refers to the capacity to perceive, understand, regulate, and use emotions effectively (Goleman & Senge, 2014). Research in educational contexts has shown that students with higher emotional intelligence demonstrate better stress management, improved academic engagement, and more adaptive coping strategies.

Mindfulness practices defined as the intentional cultivation of present-moment awareness with a non-judgmental attitude have gained increasing attention as a potential pathway for enhancing emotional regulation and self-awareness. Empirical studies indicated that mindfulness interventions among university students are associated with reduced psychological distress, improved emotional balance, and enhanced adaptability (Aldbyani & Alhadoor, 2024). Furthermore, mindfulness has been linked to academic achievement through its positive influence on adaptability and emotional regulation (Porparizi et al., 2024). These findings suggest that mindfulness may play a meaningful role in supporting students' emotional and cognitive functioning.

Self-reflection, closely related to mindfulness, also contributes to students' awareness of their emotional states and behavioral patterns. Reflective practices encourage individuals to examine their thoughts and emotional responses, thereby supporting more deliberate and regulated decision-making. Within higher education, the integration of reflective learning strategies has been associated with deeper learning and improved emotional awareness.

From a theoretical viewpoint, Neuroleadership provides a valuable perspective for understanding how mindfulness may influence emotional intelligence. Neuroleadership

integrates insights from neuroscience to explain how brain processes shape behavior, emotional regulation, and decision-making (Rock & Ringleb, 2013). Concepts such as neuroplasticity suggest that repeated mindful attention and reflective practices can strengthen neural pathways associated with emotional regulation and social cognition. Although Neuroleadership has been discussed primarily in organizational contexts, its principles may provide valuable insight into how university students develop emotionally intelligent behaviors.

In this context, limited research has explored the impact of mindfulness practices on leadership skills for business students. Given the emphasis placed by businesses on cultivating resilient and "work-ready" graduates (McQuillan et al., 2020), there is a growing need to understand the potential benefits of mindfulness practice in fostering leadership development among BBA students. As highlighted by Harris (2022), post-pandemic business environments require graduates who possess essential leadership skills and resilience. The pandemic's impact on the educational settings and students' well-being, as noted by the United Nations (2020), has developed the need to investigate how mindfulness practices can contribute to leadership development among BBA students.

Research related to the benefits of mindfulness on psychological well-being and a variety of performance measures has been growing extensively over the years. Mindfulness is widely defined as the ability to “bring one’s complete attention to the experiences occurring in the present moment, in a nonjudgmental or accepting way” (Baer, Smith, Hopkins, Krietemeyer, & Toney, 2006). Literature has shown that one particular practice that can enhance the level of mindfulness is mindfulness meditation - MM (Brown & Ryan, 2003; and Charoensukmongkol, 2013). Mindful meditation is a meditation “practice that self-regulates the body and mind, thereby affecting mental events by engaging a specific attentional set.” The key characteristic of MM is how practitioners learn to be consistently attentive to their own body action (e.g., movement, breath) or internal stimuli (e.g., emotion, thought) that they are experiencing at the present moment (Kabat-Zinn, 2015). MM also requires practitioners to cultivate a moment-to-

moment awareness of the self and the environment (Wallace, 2006), acknowledge any stimuli nonjudgmentally (Kabat-Zinn, J. (2015), and maintain equanimity in the face of any pleasant or unpleasant sensation they are encountering during the practice (Goenka, 2002). Moreover, experience in the classroom can reinforce the concept that self-reflection that enables teachers to construct meaning from their work in it (Costa & Kallick, 2000).

Mindful training has been adopted in some primary school and local universities in Thailand; however, the need for Mindful training is becoming a growing necessity which more schools, universities (local & international, private or public) should apply this to bring awareness so students of all ages can find a balance from within and external factors. Moreover, emotional intelligence is one of the five pillars, as stated by Daniel Goleman published his famous book “Emotional intelligence: why it can matter more than IQ.” Furthermore, In Thailand, the Department of Mental Health (Ministry of Public Health) classified emotional intelligence (EI) into three dimensions. The first, *Intelligence*, refers to an individual’s self-awareness, motivation, and capacity to cope effectively with problems. The second, *Goodness*, denotes the ability to regulate one’s emotions and desires. The third, *Happiness*, reflects the ability to live contentedly and maintain self-pride. According to Ramajitti Institute, in collaboration with Rajanukul Institute (The Nation, (2012), a student’s level of EI is influenced by both internal and external factors. Internal factors primarily involve heredity, referring to innate traits that vary among individuals. External factors are predominantly shaped by the environment in which a child is raised, with the family considered the primary environment identified as the most significant influence.

Neuroscientific and psychological research has shown that mindfulness practices significantly enhance brain function, particularly in areas related to self-regulation, emotional processing, and social cognition. Functional imaging studies reveal that consistent mindfulness practice strengthens the prefrontal cortex responsible for executive functions such as decision-making, focus, and impulse control while reducing activity in the amygdala, the brain’s emotional alarm system (Mrazek et al., 2013). This neural adaptation supports emotional stability, improved attention, and greater cognitive

flexibility, all of which are crucial for higher education students managing both offline and online study demands. For example, MacKenzie et al. (2019) found that mindfulness positively correlated with improved working memory, reduced mind-wandering, and better academic performance. Similarly, McBride and Greeson (2021) demonstrated that lower perceived stress mediated the relationship between trait mindfulness and higher academic achievement among college students, suggesting that mindfulness indirectly enhances learning outcomes through stress reduction. These benefits align with the principles of Neuroleadership, as understanding the brain-based mechanisms of mindfulness allows student leaders to cultivate emotional intelligence for better decision-making, productivity, and collaborative learning environments.

In addition to cognitive improvements, mindfulness and self-reflection contribute to students' overall well-being and adaptability, both of which are linked to sustained academic engagement. Mindfulness interventions have been shown to reduce anxiety, depression, and psychological distress among university students, while also improving sleep quality and emotional balance (Aldbyani & Alhadoor, 2024). Such outcomes are especially relevant in the context of the COVID-19 pandemic, where mindfulness practices supported emotional resilience and learning continuity (Aldbyani & Alhadoor, 2024). Research by Porparizi et al. (2024) further highlighted that mindfulness enhances students' adaptability, which mediates the positive relationship between mindfulness and academic achievement. From a Neuroleadership viewpoint, these findings underscore that fostering mindfulness and reflective practices in higher education equips students with not only the emotional intelligence to navigate complex academic and social demands, but also the brain-based skills to lead effectively, manage interpersonal relationships, and contribute to a positive academic setting.

1.2 Research Gap

While prior research has established associations between mindfulness and psychological well-being among university students (Aldbyani & Alhadoor, 2024; Porparizi et al., 2024), fewer studies have specifically examined the relationship between structured mindfulness practices and the development of emotional intelligence in higher education

populations. Much of the existing literature focuses on stress reduction or general mental health outcomes rather than emotional intelligence as a distinct construct.

Additionally, although Neuroleadership theory provides a brain-based explanation for emotional regulation and adaptive decision-making (Rock & Ringleb, 2013), limited empirical research has applied this theoretical lens to university students' emotional development. The majority of Neuroleadership studies remain situated within corporate or executive leadership settings, leaving a gap in understanding its relevance within academic environments.

Therefore, a need for empirical research that explores whether participation in structured mindfulness practices is associated with changes in emotional intelligence among university students. Integrating a Neuroleadership perspective to interpret how mindfulness practices may relate to emotional regulation and decision-making processes. Utilizing a mixed-methods design to capture both measurable changes and students' reflective experiences.

This study examined the relationship between mindfulness practices and the development of emotional intelligence among undergraduate students at Bangkok School of Management, including exchange students from EBS Paris – European Business School. The primary focus of the study is mindfulness as the independent variable and emotional intelligence as the central outcome, interpreted through a Neuroleadership perspective.

1.3 Problem statement

University students face increasing academic and emotional demands that require effective self-regulation and adaptive decision-making. In blended and hybrid learning environments, students often experience stress, reduced focus, and challenges in managing emotional responses. Emotional intelligence (EI), which includes emotional awareness and regulation, is widely recognized as an important factor supporting

academic engagement and interpersonal functioning. However, structured and evidence-based approaches to developing EI within higher education remain limited.

Mindfulness practices have been associated with improvements in attention, self-awareness, and emotional regulation and core components related to EI. From a Neuroleadership perspective, repeated mindful engagement may strengthen neural processes underlying emotional regulation and cognitive flexibility. Despite growing interest in mindfulness in university settings, most research emphasizes stress reduction rather than emotional intelligence as a distinct developmental outcome. Additionally, Neuroleadership has been predominantly applied in organizational contexts, with limited exploration in higher education.

Moreover, there is insufficient empirical research investigating how mindfulness interventions relate to decision-making and leadership readiness, particularly within hybrid learning environments. Therefore, acknowledging this gap to examine whether structured mindfulness practice is associated with emotional intelligence development among university students. The present study addresses this need by investigating the relationship between mindfulness practices and EI through a Neuroleadership perspective.

1.4 Rationale of Study

University students are navigating increasing academic, social, and psychological demands that require strong emotional regulation and adaptive coping skills. However, higher education institutions often emphasize technical knowledge and cognitive performance while providing limited structured interventions aimed at developing emotional competencies.

Mental health data in Thailand highlighted the vulnerability of young adults. In 2024, Thailand reported 5,217 suicide-related deaths, with individuals aged 20–29 identified as one of the highest-risk groups (The Nation Thailand, 2024). Previous national reports also indicate a rise in suicide rates among young people following the COVID-19

pandemic, with contributing factors including social isolation and disruptions to learning environments (Prachatai English, 2022). While emotional distress cannot be attributed to a single cause, these trends underscore the importance of preventive and supportive approaches within university settings.

Mindfulness practices have been associated with improvements in emotional regulation, attention, and self-awareness core components related to emotional intelligence. From a Neuroleadership viewpoint, repeated mindful engagement may support neural mechanisms involved in emotional regulation and cognitive flexibility. Although mindfulness interventions have gained popularity in higher education, much of the research emphasizes stress reduction rather than emotional intelligence development as a specific outcome.

Therefore, the rationale is to examine whether participation in a structured mindfulness practices is associated with emotional intelligence development among university students. The research contributes to a more focused understanding of how mindfulness practices may support emotional awareness and regulation in higher education settings. The findings may inform educators and institutions seeking evidence-based approaches to support students' emotional development and well-being.

1.5 Significance of the study

Building upon Harris's (2022) research which revealed uncertainties in cultivating mindful leaders in academic, this study expands to business research. Utilizing a human-centered research approach and integrating principles for student mindfulness education, this research effectively addresses the existing gap.

This study's significance to provide invaluable insights for universities and academic institutions, particularly within the context of business education. As the business organizations evolves, leadership skills through mindfulness interventions becomes significant. Ultimately, the study's significance extends to shaping educational practices that empower students to navigate the complex demands of leadership roles in the modern businesses.

1.6 Scope of the Study

This study focuses on examining the relationship between structured mindfulness practices and emotional intelligence development among undergraduate business students at Bangkok School of Management. The participants include students enrolled in the Northumbria University (Newcastle, United Kingdom) undergraduate program and exchange students from EBS Paris – European Business School.

The scope of the research is limited to an eight-week mindfulness intervention and the assessment of changes in mindfulness, emotional regulation, and related emotional intelligence constructs using a pre–post mixed-methods design. The study does not examine broader leadership competencies, organizational outcomes, or long-term professional performance. Instead, it concentrates specifically on emotional awareness and regulation within an academic context.

1.7 Research Objectives

These research objectives are:

1. To examine the association between regular mindfulness practice and emotional intelligence among university students.
2. To assess changes in students' emotional awareness and regulation following participation in a structured mindfulness program.
3. To explore students' reflective experiences of mindfulness practice in relation to emotional functioning.
4. To interpret the findings through a Neuroleadership perspective to better understand providing awareness in emotional regulation and well-being.

1.8 Limitations of the Study

Limitations of this study are:

1. Small Sample Size: The study includes a small sample (N = 30) from Bangkok School of Management and exchange students from EBS Paris – European Business School. The limited number of participants reduces statistical power and restricts generalizability.
2. Single Institutional Context: Participants are drawn from one institution in Bangkok, which limits the applicability of findings to other universities or educational settings.
3. Non-Randomized Design: The study does not use random assignment, which limits control over participant differences and may introduce selection bias.
4. No Control Group: All participants received the mindfulness intervention. Without a comparison group, observed changes cannot be attributed solely to the intervention.
5. Self-Report Bias: Data are collected using self-report instruments (e.g., MAAS, DERS, Self-Compassion Scale), which may be influenced by social desirability, subjective perception, or inaccurate self-assessment.
6. Short Intervention Duration: The eight-week program allows only short-term assessment of changes in emotional intelligence. Long-term effects were not measured.
7. Unmonitored Practice Compliance: Participants' mindfulness practice outside structured sessions could not be monitored, and variations in engagement may have influenced outcomes.
8. Cultural and Contextual Limitations: The study is conducted in Bangkok, and cultural attitudes toward mindfulness and emotional expression may influence findings. Results may not generalize to different cultural or institutional contexts.
9. Potential Confounding Variables: Other factors, such as academic stress, prior meditation experience, personal circumstances, or mental health status, may have influenced emotional regulation and awareness during the study period.

Chapter 2
Review of Literature

This chapter reviews the literature related to mindfulness practices and emotional intelligence development among university students. The review also explores self-reflection as a complementary process that supports emotional awareness and adaptive functioning in academic settings. In addition, the chapter discusses Neuroleadership as the theoretical lens guiding this study. The literature review outlines the measurement of mindfulness and emotional regulation, including the Mindful Attention Awareness Scale (MAAS) as a validated instrument for assessing dispositional mindfulness.

2.1 Mindfulness and Leadership

In various literature and researches, findings have revealed a positive relationship between mindfulness and Emotional Intelligence (Baer et al., 2006; Brown & Ryan, 2003). Since the objective of Mindful Meditation is to enhance the level of mindfulness, it can significantly facilitate the development of EQ. First, regularly practicing MM can enhance the ability to understand one's own emotions (Brown, Ryan, & Creswell, 2007). Since the meditation training requires practitioners to closely observe their thoughts and feelings moment-to-moment without any judgment or interference, practitioners tend to develop a higher tendency to be aware of their emotional state and change than those who do not. This contribution is supported by a study conducted by Feldman, Hayes, Kumar, Greeson, and Laurenceau (2007), which found that the level of mindfulness was associated positively with more clarity of feelings, attention to feelings, and lower distraction.

Furthermore, Feldman et al. (2007) found that people with a higher level of mindfulness tended to recover quickly from emotional distress compared with those with a lower level of mindfulness. Moreover, research found that practicing MM could heighten one's meta-cognitive ability (Zeidan, Johnson, Diamond, David, & Goolkasian, 2010), which is considered a higher-level cognitive ability that allows individuals to monitor and control their thought process.

Educational leadership transpires when individuals in leadership positions proactively enhance prevailing circumstances to progress in teaching and learning. These leaders assume the responsibility of establishing avenues that empower teams and students to cultivate personal insights and establish collaborative networks, developing mutual assistance throughout the process of transformation (Ibrahim & Abdalla, 2017). Moreover, the lack of mindfulness leaders, whether in domains, such as politics, organizations, education, businesses, religion, sports, and other institutions, encourages the pressing requirement for leaders who possess competence, ethical values, empathy, compassion, and mindfulness (Buller, J. L. (2022). Buller applies the concept of mindfulness directly to the unique challenges faced by academic leaders including department chairs, deans, provosts, presidents, and faculty leaders depicting how mindful awareness supports effective leadership in higher education.

Moreover, according to the research by Limphaibool W. Limphaibool N. Davidson C. (2017) The Relationship between Mindfulness and the Work Performance of Employees Working in the Manufacturing Sector, the level of mindfulness was assessed through the Philadelphia Mindfulness Scale, Thai version. Work performance was measured through annual evaluations of each individual, pertaining to work quality, work quantity, and timeliness. The results revealed a significant positive correlation between mindfulness and performance evaluation.

It has been suggested that mindfulness not only enables an individual to become less reactive, but also more psychologically flexible. Studies have found that, due to the increased capacity to cope with stress and communicate calmly and effectively, mindfulness can improve relationship satisfaction (Barnes, Brown, Krusemark, Campbell & Rogge, 2007; Wachs & Cordova, 2007). Mindfulness reduces the negative impact of stressful conflicts (Barnes et al. 2007) and improves an individual's ability to express him- or herself in social situations. Burn-out and a lack of engagement are growing concerns, which can have a negative influence on individual welfare and industrial productivity. A reduction in stress, emotional exhaustion and work burnout had been documented,

thereby enhancing overall employee wellbeing (Bazarko et al., 2013; Alexandre et al., 2016; Huang, Li, Huang, & Tang, 2015).

Leaders should possess the capacity to manage their responsibilities mindfully, comprehend their actions, enhance their physical and mental resilience, and direct not only their own focus but also the collective attention of their team or organization towards appropriate objectives. In this context, leadership necessitates mindfulness and this can be taught in business education (Koole, 2014). Additionally, Leadership encompasses power and the capability to exert influence (Northouse, 2016). It is characterized as a deliberate process through which intentional influence is extended to guide, organize, and facilitate activities and relationships within groups or organizations.

Leadership is precisely defined as the process of effecting change that diverges from the tasks associated with maintaining the status quo, a responsibility primarily under management. An emphasis on self-awareness, introspection, and establishing priorities in an individual's life results in self-mastery, a natural outcome of driving organizational change (Antonio & Jonathan, 2007). Effective leaders assist individuals in aligning their thoughts and elucidating the purpose of their efforts, enabling them to pursue meaningful objectives.

In relation to Liu et al., research article in (2021) The Effect of Mindfulness Meditation on Academic performance of students the study had applied the information process theory to demonstrate the internal mechanism between mindfulness mediation and academic performance in three pathways with three major sections: cognitive process (students' academic performance could be enhanced by improving attention on learning), information storage (by improving their working memory through mindfulness meditation), and executive cognition (by improving students' overall executive function). This study had benefited from the summary of the mechanism of mindfulness meditation and academic performance, promoting the development of mindfulness meditation-related activities and applications, and improving students' participation in mindfulness meditation interventions, thereby improving their academic performance.

Mindfulness meditation has been applied to improve well-being and mental health to improve students' health status and academic performance. Mindfulness meditation, a clinically proven method, involves nonjudgmentally concentrating people's attention on the current moment (M. Baranski (2019). It can enhance people's attention, memory, and critical awareness, promoting students' social skills and academic outcomes (Biber (2020). It is proved that MM is positively related to academic performance, such as using breathing techniques, sitting meditation and MBI. Improving academic performance (AP) can be reflected in test scores and learning abilities or skills. Maynard et al., (2017) found that mindfulness exercises improved test scores in reading and mathematics for third- to fifth-graders.

In relation with Bruton C. (2018), a rise in school dropouts in ASEAN nations, including Thailand, has led to adverse effects on GDP growth, resulting in a persistent challenge. The issue of school dropouts has been intensified by economic challenges due to the pandemic, as reported by Equitable Education Fund (EEF), (2021) Consequently, undergraduate enrollment and the availability of skilled employees have faced hurdles. It was highlighted that most Thai universities struggle to meet enrollment targets, creating empty seats and undersubscribed admission sessions. With Thailand transitioning into an aging society, diversifying student enrollment by actively recruiting Chinese students has emerged as a strategy for many universities facing these challenges.

The related literature focuses on varied studies concerning the incorporation of mindfulness within leadership and business education. Harris (2022) centered on constructing mindful educational experiences for prospective leaders, unveiling a positive correlation between mindfulness and diverse leadership styles among MIT Sloan graduates. Utilizing the Mindful Attention Awareness Scale (MAAS), quantitative survey data, and interviews, the study highlighted this connection.

Moreover, Asthana (2021) assessed mindfulness's efficacy in business education, demonstrating its favorable impact on business analysis and decision-making skills through quantitative analysis. Ahmad et al. (2023) explored web-based mindfulness's

effects on undergraduates' quality of life, indicating enhancements in well-being using anonymous peer-to-peer forums, online surveys, and the Quality-of-Life Scale (QOLS). Employing a qualitative approach, Huerta et al. (2021) evaluated mindfulness training's usefulness for engineering students, revealing its potential in nurturing intrapersonal and interpersonal competencies. However, Tuntinakhongul (2012) investigated a leadership model for Thai higher education, emphasizing lifelong learning and leadership skills for science and technology graduates through mixed-method research.

Overall, these studies highlight diverse research gaps, emphasizing the potential of addressing these gaps to enrich knowledge about mindfulness's applications and advantages for personal and professional development among (BBA) students and leaders.

2.2 BEM Sex-Role Inventory (BSRI)

The BEM Sex-Role Inventory (BSRI) is a widely used self-report questionnaire designed to assess an individual's gender role orientation or psychological traits associated with femininity and masculinity, Choi, N., & Fuqua, D. R. (2003). The BSRI measures individuals' endorsement of stereotypically masculine and feminine characteristics. It consists of 60 items, with 20 items related to femininity, 20 items related to masculinity, and 20 "filler" items that are not scored. Each item is rated on a 7-point Likert scale, ranging from 1 (never or almost never true) to 7 (always or almost always true). The BSRI provides scores on two dimensions: Femininity and Masculinity. Participants' scores on these dimensions reflect their perceived psychological attributes or traits associated with femininity and masculinity, rather than their biological sex. The BSRI does not assess an individual's gender identity or gender expression.

The feminine dimension of the BSRI includes items such as "gentle," "affectionate," and "sensitive to the needs of others." The masculine dimension includes items such as "independent," "self-reliant," and "willing to take a stand." Participants rate the extent to which they feel each item describes themselves. Based on their responses, individuals receive scores indicating their degree of endorsement of feminine and masculine traits. High scores on femininity suggest a greater endorsement of traditionally feminine characteristics, while high scores on masculinity indicate a stronger endorsement of traditionally masculine traits. Some individuals may score high on both dimensions, indicating an androgynous gender role orientation.

The BSRI has been used in research to investigate various aspects of gender roles, including gender stereotypes, gender identity development, and the relationship between gender role orientation and psychological well-being. It has contributed to the understanding of how societal expectations of femininity and masculinity influence individuals' self-perception and behavior. The BEM Sex-Role Inventory (BSRI) is not specifically designed for mindfulness research, as it focuses on measuring gender role orientation rather than mindfulness. Hence, this is used to only understand gender roles here to perhaps develop appropriate strategies for mindfulness or leadership based on gender and come to a common and suitable practice for all genders.

BEM Sex-Role Inventory (BSRI) could be a valuable tool in leadership and Neuroleadership research to understand gender roles better. In leadership studies, understanding the influence of societal perceptions of masculinity and femininity on leadership styles and effectiveness can be crucial. The BSRI, with its dimensions of masculinity and femininity, can offer a framework to explore how these gender stereotypes might affect leadership behaviors, decision-making, and team dynamics.

In the present study, the BSRI is included for descriptive and demographic profiling purposes only. It is not treated as a primary variable in hypothesis testing and is not analyzed as a predictor or outcome variable. Rather, it provides contextual background information regarding participant characteristics that may relate to emotional expression and self-perception. However, the study does not aim to examine the relationship between gender role orientation and emotional intelligence, nor does it interpret findings based on BSRI classifications.

2.3 Emotional Intelligence and Difficulties in Emotion Regulation Scale (DERS) – Serenity programme

Emotional Intelligence consists of four functions. First, appraisal and expression of emotion in the self refers to the ability to understand one's own deep emotions and be able to express them naturally. Second, appraisal and expression of emotion in others refers to the ability to perceive and understand the emotions of other people (Goleman, 2014). Third, regulation of emotion in the self refers to the ability to control one's own emotion, which is crucial for an individual to recover quickly when experiencing a negative emotion. Fourth, using emotion to facilitate decision making represents the ability to direct one's own emotions to help improve performance.

Moreover, people who regularly practice Mindful Meditation can easily develop the ability to detect and understand the emotions of others. In particular, being mindful allows individual to better focus their attention on how other people around them are feeling (Brown et al., 2007), which subsequently helps them decipher emotional cues of others more accurately (Krasner et al., 2009). Thus, practicing Mindful Meditation can significantly enhance the ability of individuals to regulate and control their emotions (Cahn & Polich, 2006).

Nevertheless, Tsai, Chen, and Liu (2007) argued that a positive mood not only makes people easily recall an outstanding performance that they had in the past, but it also enhances their positive feelings about their past performance, thereby allowing them

to raise expectation about their ability. Plus, their study conducted on employees and supervisors from insurance companies in Taiwan also found a strong positive relationship between positive mood and task-specific self-efficacy measure (Tsai et al., 2007).

As for this research Emotion regulation was assessed with six subscales of the Difficulties in Emotion Regulation Scale (DERS) Labbé, Côté, Gosselin, & Dagenais, (2012), nonacceptance of emotional responses (6 items), difficulties engaging in goal-directed (5 items), impulse control difficulties (6 items), lack of emotional awareness subscale (6 items), limited access to emotion regulation strategies (8 items), and lack of emotional clarity (5 items). The DERS was created to evaluate difficulties in emotion regulation. The inadequacy of emotional awareness subscale reveals an inattention to, and lack of awareness of, emotional responses (e.g., “When I’m upset, I take time to figure out what I’m really feeling”, reverse scored), while the impulse control difficulties reflect difficulties remaining in control of one’s behavior when experiencing negative emotions (e.g., “When I’m upset, I have difficulty controlling my behaviors”). Higher scores for each subscale indicate greater difficulties in emotion regulation (i.e., more emotion dysregulation). With the brief explanation stated, this makes it clear and an opportunity for the experts’ part of this research to monitor and reflect the emotional regulation.

2.4 MAAS 15 item scale based on day-to-day experiences (Mindful Attention Awareness Scale)

Mindfulness in this study was measured using the Mindful Attention Awareness Scale (MAAS) developed by Brown and Ryan (2003). The MAAS is a 15-item self-report instrument designed to assess dispositional mindfulness, specifically the individual’s tendency to maintain attention and awareness of present-moment experiences in daily life. The scale focuses primarily on the awareness component of mindfulness rather than multiple dimensions.

Participants responded to items reflecting everyday experiences of absent-mindedness or automatic functioning (e.g., operating on “autopilot” or not paying attention to present activities). Responses are rated on a Likert-type scale, with higher scores indicating greater levels of mindful attention and awareness.

In the present study, the MAAS was administered before and after the eight-week mindfulness intervention to assess changes in participants’ levels of present-moment awareness. Pre–post comparisons were conducted to determine whether engagement in structured mindfulness practice was associated with increased mindful attention.

The MAAS was selected because it is widely validated in both clinical and non-clinical populations and demonstrates strong psychometric properties (Brown & Ryan, 2003). Its focus on attentional awareness aligns with the study’s conceptualization of mindfulness as a foundational mechanism supporting emotional regulation and emotional intelligence development. By assessing day-to-day awareness, the scale provides an appropriate measure of the attentional processes central to this research.

2.5 Reflection and Self Compassion Scale

This study incorporated the Reflection and Self-Compassion Scale developed by Neff (2003). This scale consists of six coding keys that was utilized to quantitatively measure levels of self-compassion among undergraduate business students. The benefits of employing this scale within a quantitative research framework lie in its structured and measurable nature. The scale's specific coding keys allow for a systematic assessment of various components of self-compassion, enabling researchers to quantify and analyze levels of self-kindness, common humanity, and mindfulness in the context of these students' experiences. Through open-ended interviews guided by the scale's coding keys, the researcher could focus into the qualitative aspects of self-compassion, exploring students' personal narratives, perceptions, and lived experiences concerning self-kindness, mindfulness, and common humanity. This qualitative exploration complements the quantitative analysis, offering rich, context-specific data that quantitative measures alone might not capture.

Overall, engaging in weekly UCLA mindfulness meditations and subsequently writing reflections provides multifaceted benefits for students, both online and offline. Through reflective writing, students deepen their understanding of the practice, exploring thoughts, emotions, and sensations experienced during meditation, fostering greater self-awareness and recognition of how mindfulness impacts their mental and emotional states. This process facilitates the integration of mindfulness teachings into daily life, bridging theory with real-life application, enhancing stress management skills, and reinforcing commitment to regular practice. Furthermore, sharing reflections within online communities cultivates a sense of support and communal learning, while continual reflection over time supports long-term personal growth and adaptation of mindfulness techniques to suit evolving needs, ultimately benefiting students in various aspects of their lives, both in virtual spaces and offline interactions.

2.6 Cultivating a Mindful and Neuroleadership Culture

Understanding and integrating mindfulness practices into various undergraduate programs lay a foundational framework for future leaders entering the workforce. Grasping the principles of Neuroleadership, which explore the neuroscience behind effective leadership, empowers graduates to comprehend the intricacies of human behavior, decision-making processes, and team dynamics in organizational settings. By integrating these concepts across undergraduate curricula, students gain a holistic understanding of leading with empathy, fostering inclusive environments, and optimizing team performance, skills vital for thriving in today's competitive and rapidly evolving businesses.

Research in the field of Neuroleadership highlights the impact of mental training on brain plasticity and functioning (Tomasino et al., 2013; Fox et al., 2014). Specifically, mindfulness meditation implicates key neurocognitive mechanisms such as attention control, emotion regulation, and self-awareness (Tang et al., 2015). This field focuses into the neural underpinnings of leadership and management practices, amalgamating data from various domains within neuroscience. The aim is to create a scientific foundation for leadership, making it accessible to leaders seeking personal and professional development. Neuroleadership transforms soft skills into concrete principles by integrating the science behind them. It encompasses four primary study areas: decision-making and problem-solving, emotional regulation, collaborating with and influencing others, and facilitating change. Each area integrates neuroscience perspectives with established models to address prevalent challenges in leadership practices. This interdisciplinary approach holds the promise of enhancing leadership capabilities by grounding them in the understanding of brain physiology and cognition.

Neuroleadership is not measured in this study and is used solely as a theoretical perspective to interpret the findings. It provides a brain-based framework for understanding how mindfulness practices may support emotional regulation, cognitive flexibility, and adaptive decision-making. Within undergraduate education, introducing concepts related to mindfulness and Neuroleadership may help students develop greater emotional awareness and reflective capacity.

Chapter 3
Research Methodology

3.1 Introduction

The chapter presents the research design, population and sample, data collection procedures, instruments used for measurement, and data analysis methods. Ethical considerations, limitations related to the study design, and steps taken to ensure validity and reliability are also discussed.

3.2 Operational definitions

Operational definitions are established to define key terms, concepts, and variables. This section clarifies the meanings attributed to mindfulness, leadership skills, and other relevant factors within the context of this research.

a) Mindful Attention Awareness Scale (MAAS) – This is a 15-item self-report questionnaire designed to measure a fundamental aspect of mindfulness. This aspect involves maintaining a receptive and non-judgmental awareness of the present moment by simply observing one's thoughts, feelings, and experiences, developed by (Brown and Ryan, 2003). The MAAS can be a valuable tool for researching mindfulness among business students, providing insights into their ability to stay present and attentive, which can be relevant for leadership, decision-making, and stress management in a business context.
b) Leadership Skills: In this research, leadership skills encompass a range of competencies and behaviors that enable individuals to guide and influence others effectively through valid and reliable questionnaires.
c) Mindful leadership: Leadership approach where managers/people intentionally develop their capacity to self-awareness, growing receptive, attentive, and empathetic while engaging with team members, Walsh, M. M., & Arnold, K. A. (2017).

3.2 Conceptual and Theoretical Framework

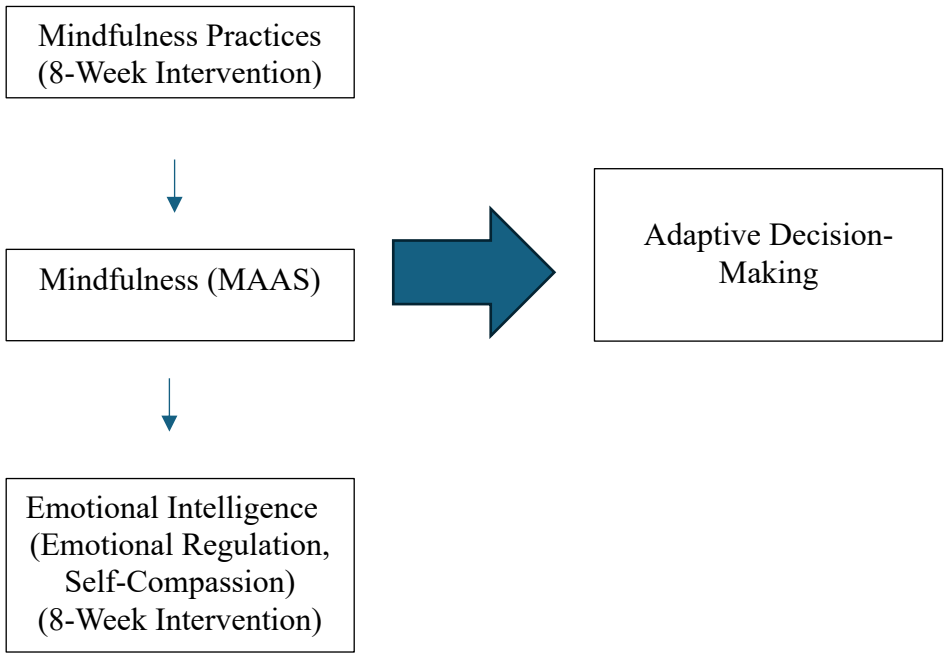
Theoretical Framework

This study is grounded in Neuroleadership theory, which integrates principles from neuroscience, psychology, and leadership studies to explain how brain processes influence attention, emotional regulation, and decision-making. From a Neuroleadership perspective, mindfulness strengthens neural pathways associated with focused attention and cognitive control, supporting greater emotional regulation and behavioral flexibility. In this research, Neuroleadership is not measured as a variable; rather, it serves as the theoretical lens connecting mindfulness practices to emotional intelligence development and leadership-related outcomes.

Conceptual Framework

The conceptual framework in Figure 3.1 shows that mindfulness is operationalized using the Mindful Attention Awareness Scale (MAAS). Participation in an eight-week mindfulness program serves as the primary intervention. Emotional Intelligence (Primary Dependent Variable) Emotional intelligence is examined through related constructs such as emotional regulation and self-compassion (measured using DERS and the Self-Compassion Scale). Decision-Making (Related Outcome) Decision-making is conceptualized as an applied outcome associated with emotional regulation and cognitive flexibility.

Figure 3.1: Conceptual Framework



3.3 Target Population and Sampling strategy

This study applied a mixed research method where findings of students in Bangkok were carried out during their semester of study. During their semester of study, students were briefed about the research and any student can volunteer to be part of it. *A total of thirty students* (22 offline and 8 online) were voluntarily recruited to complete the pre-post mindfulness eight-week course by UCLA Mindful Awareness Research Center on Breathing Meditation, Breath, Sound, Body Meditation, Complete Meditation Instructions, Meditation for Working with Difficulties, Loving Kindness Meditation, Body and Sound Meditation, Body Scan Meditation, and Body Scan for Sleep.

The study commenced prior to the COVID-19 pandemic when courses were delivered in a traditional face-to-face format. During the course of the research, the COVID-19 outbreak led to institutional shifts from onsite instruction to fully online learning.

As a result, the intervention was implemented across both modalities. Participants initially engaged in the program in person, and subsequently, some continued under online delivery conditions due to pandemic-related restrictions. This transition provided continuity of the intervention while adapting to public health measures.

Participants were provided with official audio recordings available from the UCLA Mindful Awareness Research Center to support their daily mindfulness practice throughout the eight-week intervention. The materials included guided meditations designed to ensure consistency and structure in participants' practice across both onsite and online formats.

To assess changes associated with the intervention, students were required to complete a set of validated questionnaires before the commencement of the eight-week mindfulness program (pre-intervention) and again immediately after the completion of the eight weeks (post-intervention). The instruments administered included the Mindful Attention Awareness Scale (MAAS), the Self-Compassion Scale, Bem's Sex Role Inventory, and the Difficulties in Emotion Regulation Scale (DERS). This pre–post design enabled the study to examine potential changes in dispositional mindfulness, emotional regulation, and related psychological constructs following sustained mindfulness practice.

A total of thirty students (22 offline and 8 online) were guided and were checked with weekly about their mindful meditation practices. The research focused on analyzing the sample size using convenient sampling method where students have voluntarily agreed to the eight-week Mindfulness Meditation practices. Twenty-two students (offline) were moderated by researcher and the Head of Academic Administration of Bangkok School of Management. Ms. Tina Yang was to only check see if all students completed the questionnaires.

The research started in August 2017 and ended in November 2024. The research focused on students taking business courses at Bangkok School of Management ages between (18-40 years old). Regarding modality (offline vs. online delivery), the study included participants who completed the intervention in face-to-face format prior to COVID-19 and participants who completed it online during COVID-19 restrictions. The primary analysis focused on overall pre–post change across the entire sample. However, modality was not treated as a randomized experimental condition but rather as a contextual adaptation due to the pandemic.

Potentially there were students who started the practice and due to their personal stress and pressure to manage some withdrew. They were then disregarded.

The sampling strategy included elements of both convenience sampling and purposive sampling. Convenience sampling was present because participants were recruited from an accessible population of undergraduate students at a single institution. Purposive sampling was applied in that only students who were willing to participate in mindfulness practices, complete surveys, and engage in reflection were included in the study. Hence, the study used a non-probability, volunteer-based sample drawn from a convenient university population, with purposive inclusion criteria related to participation willingness, (Babbie, 2016).

3.4 Data collection procedure and Questionnaire

The data collection process employed both primary and secondary procedures. For primary research, a mixed-methods approach was adopted, encompassing qualitative and quantitative data collection techniques. Surveys and interviews served as instruments to gather insights from BBA students about their leadership skills development through mindfulness practices. This structured approach enabled the researcher to measure changes over time and evaluate the potential impact of sustained mindfulness practice (Bryman, 2016).

The broader research timeline (2017–2024) reflects the extended period during which:

- The study was conceptualized and designed,
- Data were collected across different semesters,
- COVID-19 disruptions required adaptation from offline to online delivery, and
- Data analysis and research were completed.

The instruments administered included the Mindful Attention Awareness Scale (MAAS), the Self-Compassion Scale, Bem's Sex Role Inventory, and the Difficulties in Emotion Regulation Scale (DERS). These validated tools provided numerical data that were analyzed to determine whether statistically significant differences emerged between pre- and post-intervention scores.

The qualitative method complemented the quantitative findings by gathering participants' reflections on their experiences during the mindfulness intervention. Informal reflections and feedback provided contextual insights into how students perceived the influence of mindfulness on their emotional awareness and leadership development. This integration of qualitative and quantitative data strengthened the interpretative depth of the study and enhanced the overall validity of the findings.

All data were collected during the academic semester in which the intervention was implemented, with adjustments made when courses transitioned from face-to-face to online delivery during the COVID-19 period. Regardless of modality, the same data collection procedures and instruments were used to ensure consistency.

There was open- ended questions applied for interviews. During online classes students were asked and checked upon if there were any feedback or challenges. Moreover, final three questions based on their experience, self-awareness, Neuroleadership and increase in productivity were addressed. Pseudonyms for the participants were developed to keep their confidentiality and anonymity. The eight-week free guided mindful training course by UCLA Mindful Awareness Research Center is relevant in terms of its validity from a renowned academic institution, the routine outline of various types of mindfulness training and its availability that justifies the usage for this study. *All meditations are by MARC's Director for Mindfulness Education, Diana Winston (2017)*, website Link: http://marc.ucla.edu/mindful-meditations

Every week a topic and guidance on how it must be done were guided to participants The topic for each week is shown in Table 3.1. Students' participating in this research study had to practice every day on the week's guided approach. Every week students were to write their reflection for each week's meditation training and how they felt. There was a final self-reflection writing activity after the eight-week meditation training. The full Questionnaire can be seen in the Appendix.

Scheduled outline for weekly practice:

Week 1: Breathing Meditation – students will be practicing the five minutes breathing meditation any time of the day for a week;
Week 2: Breath, Sound, Body Meditation – students will be practicing the twelve minutes breath, sound, and body meditation any time of the day for a week;
Week 3: Complete Meditation Instructions - students will be practicing the nineteen minutes complete meditation any time in the evening or night for a week;
Week 4: Meditation for Working with Difficulties - students will be practicing the seven-minute meditation for working with difficulties any time in the evening or night for a week;
Week 5: Loving Kindness Meditation - students will be practicing the nine-minute meditation for loving kindness meditation any time in the evening or night for a week;
Week 6: Body and Sound Meditation - students will be practicing the three minutes body and sound meditation any time of the day for a week;
Week 7: Body Scan Meditation – students will be practicing the three minutes body scan meditation any time in evening or night;
Week 8: Body Scan for Sleep - students will be practicing the thirteen minutes body scan for sleep meditation any time at night before they sleep for a week.

Table 3.1: List of every week's Mindful Meditation training

Language	Meditation Title	Duration
English	Breathing Meditation	5 mins
English	Breath, Sound, Body Meditation	12 mins
English	Complete Meditation Instructions	19 mins
English	Meditation for Working with Difficulties	7 mins
English	Loving Kindness Meditation	9 mins
English	Body and Sound Meditation	3 mins
English	Body Scan Meditation	3 mins
English	Body Scan for Sleep	13 mins

Source: UCLA Mindful Awareness Research Center, (2017).

Questionnaire Design

Quantitative part: Pre-Post

All questionnaires are in English for students. Students participating in the research will be understanding the basics of English. The questionnaires given to the students in the beginning of the study and after the eight-week course are based on BEM Sex-Role Inventory (BSRI), Difficulties in Emotion Regulation Scale (DERS) – Serenity programme, MAAS 15 item scale based on day-to-day experiences (Mindful Attention Awareness Scale), Androgyny (Masculinity & Femininity) and the Self Compassion Scale. At the end of the questionnaires there is a note taking page where the participant can take notes on self-reflection after taking the eight-week course. The questionnaires can be seen in the Appendix.

Moreover, students with a high self-compassion scores before the eight-week stage would show a greater change after the eight-week course on applying the self-compassion scale, emotional intelligence and increase in their productivity. Students with a high emotional intelligence score before the eight-week stage will show a greater change after the eight-week course on applying the DERS scores in Emotion Regulation, self-compassion scale, and increase in their productivity.

The primary comparison in this study was:

Pre-intervention scores vs. Post-intervention scores

The analysis examined whether participation in the eight-week mindfulness program was associated with statistically significant changes in:

1. Dispositional mindfulness (MAAS)
2. Emotional regulation (DERS)
3. Self-compassion

3.5 Research Methods and Hypotheses

The research applied mix method using Quantitative and Qualitative research by using descriptive statistics, scores and involves interviews of students with high MAAS scores analyzing the results descriptively. Qualitative Data Analysis will be used to analyze data collected from the interviews. The transcripts will be coded to identify recurring themes and patterns in participants' responses on mindfulness, leadership. Whereas, Quantitative Data Analysis were shown through descriptive statistics using SPSS, including means and standard deviations computed for the quantitative survey data to provide an overview of participants' mindfulness levels and leadership skill development for pre and post surveys.

The central statistical test evaluated whether post-intervention scores differed significantly from baseline scores within the same participants. Regarding modality (offline vs. online delivery), the study included participants who completed the intervention in face-to-face format prior to COVID-19 and participants who completed it online during COVID-19 restrictions. The primary analysis focused on overall pre–post change across the entire sample. If modality differences were examined, this would require an additional statistical comparison (e.g., independent samples t-test or repeated measures analysis) to determine whether delivery format influenced outcomes. However, modality was not treated as a randomized experimental condition but rather as a contextual adaptation due to the pandemic.

Paired-Samples t-Test

To examine whether the eight-week mindfulness intervention was associated with changes in participants' scores, paired-samples t-tests were conducted. This test was appropriate because it compares mean scores from the same participants at two time points (pre-intervention and post-intervention). The paired t-test evaluates whether the mean difference between the two sets of scores is statistically significantly different from zero.

Assumptions of the Paired t-Test

Prior to conducting the analyses, the assumptions underlying the paired-samples t-test were considered:

1. Continuous Dependent Variable – The outcome measures were treated as continuous variables derived from validated Likert-scale instruments.
2. Independence of Observations – Each participant's responses were independent of others.
3. Normality of Difference Scores – The distribution of the difference between pre- and post-test scores was assessed for approximate normality. Given the modest sample size (n = 30), normality checks were important to ensure the robustness of results.

Handling of Missing Data

Efforts were made to minimize missing data by monitoring participants weekly and ensuring questionnaire completion before and after the intervention. In cases of incomplete responses:

- Participants who did not complete both pre- and post-intervention surveys were excluded from paired analyses.

- For minor item-level missing data within completed surveys, mean substitution within the scale was applied only when missing responses were minimal and did not exceed acceptable thresholds recommended by the instrument guidelines.

For Qualitative study

Employing an inductive coding methodology, the research seeks to organically extract themes and patterns from the data, offering nuanced insights into the relationship between mindfulness practices and the cultivation of crucial leadership skills. Thematic analysis was applied to systematically retrieve codes and develop themes from the data. The data were first carefully reviewed and initial codes were generated to capture recurring patterns and meaningful features.

Four students were interviewed. The qualitative component of this study included four participants (n = 4). Consistent with qualitative research principles, the emphasis was placed on depth of insight rather than numerical representation (Creswell & Poth, 2018). The qualitative component of this study employed purposeful sampling to explore participants' experiences within a bounded educational context. All interviewees completed the same eight-week mindfulness intervention within the same institutional setting, thereby sharing a common experiential foundation despite minor demographic variation. A smaller sample enables the researcher to engage deeply with each transcript, preserving the complexity of individual meaning-making processes.

Representative quotations were selected to illustrate participants' experiences and perspectives. Cultural nuances were evident, particularly among French exchange students, who occasionally used phrases such as "très bien" or "c'est super." Some participants employed dictionaries to translate French thoughts into English when responding to questions 2 and 3, providing additional depth to their reflections on mindfulness and leadership.

A comparative analysis of participants' responses was conducted to extract comprehensive insights. French interjections such as "oui" or "merci" were noted throughout the discussions, highlighting cultural influences on perceptions of mindfulness and its role in enhancing leadership skills. This interpretive process allowed for a nuanced understanding of how mindfulness practices are experienced across diverse educational and cultural contexts.

Inductive Thematic Analysis Process

An inductive thematic analysis was conducted to examine the qualitative interview data. The process followed a systematic progression from raw data to overarching themes.

First, transcripts were reviewed repeatedly to ensure familiarity with the data and to identify recurring ideas related to mindfulness, emotional regulation, leadership, productivity, and personal health awareness.

Second, meaningful statements were extracted and assigned initial open codes. These included emotional awareness, stress recognition, self-reflection, improved focus, reduced reactivity in decision-making, productivity enhancement, mind–body awareness, leadership confidence, and adaptability during COVID-19. Codes were kept close to participants' language to preserve authenticity.

Related codes were grouped into broader sub-themes. For example, emotional awareness and stress recognition were clustered under Increased Emotional Regulation, while improved focus and productivity were categorized as Cognitive Enhancement. Reflection and questionnaire awareness were grouped under Reflective Self-Assessment.

Formulated Quantitative Hypotheses

H1 Dispositional Mindfulness

Participants will demonstrate significantly higher post-intervention scores on the Mindful Attention Awareness Scale (MAAS) compared to pre-intervention scores following the eight-week mindfulness program.

H2 Emotional Regulation

Participants will demonstrate significantly lower post-intervention scores on the Difficulties in Emotion Regulation Scale (DERS) compared to pre-intervention scores following the eight-week mindfulness program.

H3 Self-Compassion

Participants will demonstrate significantly higher post-intervention scores on the Self-Compassion Scale compared to pre-intervention scores following the eight-week mindfulness program.

3.5 Reliability and Validity

The internal consistency reliability of each scale was assessed using Cronbach's alpha. Although the MAAS, DERS, and Self-Compassion Scale have demonstrated strong reliability in prior research, it is recommended to report reliability coefficients within the current sample to ensure consistency in the present context.

All instruments used in this study have demonstrated strong internal consistency in prior validation studies, with Cronbach's alpha values exceeding .70, indicating acceptable reliability. Cronbach's alpha coefficients were calculated for each instrument at pre-intervention and post-intervention. Alpha values of .70 or higher were considered acceptable indicators of internal consistency.

The instruments used in this study are well-established and have demonstrated strong construct validity, convergent validity, and factorial validity in previous research.

- MAAS – validated measure of dispositional mindfulness
- DERS – validated measure of emotion regulation difficulties
- Self-Compassion Scale – validated measure of self-compassion

The study employed previously validated scales without modification, content validity was preserved. The use of standardized instruments strengthens measurement validity and supports the credibility of quantitative findings.

To ensure credibility, a semi-structured interview protocol was developed based on the research objectives and conceptual framework. The interview questions were reviewed for clarity and alignment with the study aims. Following the first two interviews, the researcher confirmed that participants clearly understood the questions, and no substantial modifications were required.

Consistency in questioning was maintained across all four interviews. Reflexive notes were kept during analysis to reduce researcher bias and enhance confirmability Consistent with qualitative research principles (Creswell & Poth, 2018).

3.6 Ethical Considerations

This study adhered to established ethical research standards, ensuring confidentiality, informed consent, and the participants' right to withdraw at any stage. Prior to participation, students were informed of the study's purpose, the nature of the interview questions, and the estimated time commitment required. Participation was entirely voluntary, and students were assured that their academic standing would not be affected by their decision to participate or withdraw.

All survey responses and interview data were treated as confidential. Participants were informed in advance that they could discontinue any activity if they felt uncomfortable. During the transition from face-to-face to online delivery due to the COVID-19 pandemic, additional care was taken to ensure privacy in virtual settings. Online survey platforms were secured, and virtual interviews were conducted in private settings to protect participant confidentiality.

Chapter 4

Research Findings and Detailed Analysis

The findings for the three questions are being analyzed after interviewing face to face with four respondents. The four respondents were above 20 years old. A total of thirty students (22 offline and 8 online) were voluntarily recruited to complete the pre-post mindfulness eight-week course by UCLA Mindful Awareness Research Center

4.1 Qualitative Research Findings

Questions asked

Question 1: Has this research been beneficial for you and brought awareness in your personal Health? Give your views on answering the questionnaires on BEM Sex-Role Inventory (BSRI), Difficulties in Emotion Regulation Scale (DERS) – Serenity programme, MAAS 15 item scale based on day-to-day experiences (Mindful Attention Awareness Scale), and Self Compassion Scale.

Question 2: Are you able to understand more about Social Emotional Learning (SEL)/Emotional Intelligence before and after the eight-week Mindful Meditation course? Share your experience and how this experience has improved decision-making/leadership skills and awareness in Personal Health.

Question 3: How was experience in participating in the eight-week Mindful Meditation training of UCLA? Has your productivity increased and improvement in decision making? Did writing the reflections weekly help you monitor and become aware of important aspect in your life. Do you feel you all this can help in better Neuroleadership skills?

Table 4.1: Thematic Analysis of the Three Questions

Interview Question	Initial Codes	Sub-Themes	Overarching Themes	Summary of Key Findings
Q1: Personal Health & Questionnaire Experience	Emotional awareness, stress recognition, awareness of thoughts, identifying feelings, noticing habits, reflection through scales	Increased Emotional Regulation	**Mindfulness and Personal Health Awareness**	Participants reported greater awareness of emotional triggers, stress responses, and internal thought patterns after the intervention.
	Self-evaluation, awareness through MAAS, reflection via DERS, self-compassion insight, gender-role reflection	Reflective Self-Assessment Process		The questionnaires functioned as reflective tools that deepened understanding of attention, emotional reactions, and self-compassion.
	Online transition, reduced interaction, adaptability	Contextual Adaptation		Despite COVID-related disruptions, participants remained engaged and adaptable in completing the program.
Q2: SEL, EI, Decision-	Emotional control, empathy, patience,	Enhanced Emotional Intelligence	**Emotional Intelligence and**	Participants described improved understandin

Making & Leadership	better communication, self-regulation		**Leadership Development**	g of SEL and emotional intelligence concepts, especially emotional regulation and empathy.
	Reflective thinking, less impulsive decisions, clearer judgment	Reflective Decision-Making		Mindfulness supported slower, more deliberate responses in academic and leadership situations.
	Stress reduction, resilience, mind–body awareness	Mind–Body Integration		Greater awareness of physical and mental health connections contributed to resilience and healthier coping strategies.
Q3: Experience of 8-Week Training & Neuroleadership	Commitment to practice, openness to learning, transformative experience	Transformational Growth	**Transformational Learning and Neuroleadership Potential**	The intervention was perceived as transformative, fostering adaptability and sustained engagement.
	Focus improvement, productivity increase, mental clarity	Cognitive Enhancement		Participants reported stronger concentration, improved productivity, and clearer

				thinking, particularly under stress.
	Weekly reflection, identifying patterns, self-discovery	Deepened Self-Awareness		Reflective writing enhanced insight into behavioral and emotional patterns.
	Leadership insight, brain–behavior awareness, emotional control	Neuroleadership Application		Participants connected mindfulness with leadership capacity, emotional intelligence, and improved professional decision-making.

Table 4.1 findings depict the integrated thematic analysis of face-to-face interviews with four students (one from Bangkok School of Management and three exchange students from EBS–Paris) who completed the eight-week UCLA Mindful Meditation course revealed coherent and interrelated patterns across all thematic categories.

Participants reported that the mindfulness intervention significantly enhanced emotional regulation, self-awareness, and attentiveness to personal health. Engagement with structured self-assessment instruments (DERS, MAAS, and the Self-Compassion Scale) deepened reflective thinking and increased awareness of emotional patterns, stress responses, daily mindfulness habits, and levels of self-compassion. This reflective engagement contributed to greater personal health consciousness and intentional behavioral adjustment.

Students' understanding of Social Emotional Learning (SEL) and Emotional Intelligence (EI) evolved from a primarily theoretical perspective to an experiential and applied competency. Post-intervention, participants described improved empathy, better stress management, more thoughtful responses in challenging situations, and increased confidence in leadership roles. These developments translated into more reflective decision-making, enhanced interpersonal awareness, and stronger leadership readiness.

In addition, participants consistently reported gains in productivity and cognitive clarity. They described improved focus, better task prioritization, and reduced emotional reactivity when making decisions. Weekly reflective writing served as a structured self-monitoring tool, reinforcing metacognitive awareness and supporting sustained personal development throughout the program.

Despite methodological limitations arising from COVID-19-related travel restrictions and the absence of offline participants, students demonstrated adaptability and continued engagement with mindfulness practices in hybrid learning conditions. This resilience further illustrated the relevance of mindfulness training for developing adaptive leadership and Neuroleadership-related competencies.

Collectively, the findings indicated that the eight-week mindfulness intervention facilitated measurable growth in emotional regulation, self-awareness, productivity, decision-making, leadership development, and personal health awareness. The qualitative results complement the quantitative pre–post outcomes, demonstrating a clear inductive progression from individual lived experiences to broader conceptual themes aligned with the study's mixed-method design and theoretical framework.

The research provided a valuable platform for students to critically reflect on their educational journeys, particularly in comparing the pedagogical approach of their home institution, EBS France, with their experience at BSM. A key point of differentiation identified by participants was the integration of mindfulness practices within the business curriculum, which they perceived as contributing not only to academic performance but

also to personal growth. During debriefing sessions, students emphasized that mindfulness fostered stronger self-regulation, improved focus, and a more balanced approach to learning benefits they had not experienced to the same extent in their previous academic environments. These reflections directly addressed Question 2, highlighting how mindfulness influenced learning balance, decision-making, leadership skills, and personal health awareness. Participants described how regular practice enhanced their emotional intelligence, shaped their study habits, and informed their leadership and collaboration styles. The exchange of perspectives between local and international students further enriched this understanding, illustrating how mindfulness can be meaningfully embedded within business education to support holistic development.

Overall, the qualitative analysis of participants (AAOM) before and after the eight-week Mindful Meditation course demonstrated substantial gains in Social Emotional Learning (SEL) and Emotional Intelligence (EI), which translated into more effective decision-making, strengthened leadership competencies, and heightened personal health awareness, underscoring the transformative potential of mindfulness-based interventions in business education.

The eight-week UCLA Mindful Meditation training served as a catalyst for personal and academic growth among the exchange student cohort. Their experiences were characterized by adaptability to learning contexts, measurable improvements in cognitive functioning, deeper self-awareness facilitated by reflective practices, and an expanded understanding of leadership through the viewpoint of mindfulness. The intersection of mindfulness training and Neuroleadership emerged as a promising area for further exploration, with potential implications for both leadership development and business education pedagogy. This can be viewed in Table 4.2

Table 4.2: Matrix Diagram of 4 Participants

Category	Code(s)	Description	Theme	Subtheme	Abbreviation
Mindful Meditation Experience	A1, A2, A3	Participants' experiences and insights gained from the eight-week Mindful Meditation training	Mindful Meditation Insights	Emotional intelligence impact, decision-making, productivity, and self-reflection	Meditation Insights (Expérience de la Méditation)
Emotional Intelligence Development	B1, B2	Changes in participants' emotional understanding and regulation following mindfulness practice	Impact on Emotional Intelligence	Enhanced self-awareness, improved decision-making, emotional regulation	EI Development (Développement de l'Intelligence Émotionnelle)
Self-Reflection and Awareness	C1, C2	Role of reflective practices in monitoring personal thoughts, behaviors, and priorities	Reflections and Self-Awareness	Self-monitoring, recognition of important life aspects, personal insight	Self-Awareness Impact (Impact de la Conscience de Soi)
Neuroleadership Skills Enhancement	D1, D2	Integration of mindfulness practices with leadership and cognitive performance	Neuroleadership and Mindfulness	Connection between mindfulness, emotional intelligence, decision-making, and productivit	Neuroleadership (Neuro-leadership)

				y	

Table 4.3: Final Inductively Derived Themes from Integrated Codes and Subthemes

Final Theme	Integrated Codes	Key Subthemes (from Q1–Q3)
1. Mindfulness and Personal Health Awareness	A1–A5, B1–B2, C3–C4	Emotional regulation; self-awareness; stress reduction; mind–body connection; self-monitoring; self-compassion; recognition of emotional patterns
2. Emotional Intelligence and Leadership Development	A4–A5, B3–B4, D1–D2, D3	Enhanced SEL/EI competencies; empathy; balanced decision-making; interpersonal communication; leadership application; emotional regulation in leadership contexts
3. Transformational Learning and Neuroleadership Potential	A6–A8, B5–B6, C5–C6, D3–D4	Transformational learning experience; adaptability (COVID context); productivity; clarity; reflective practice; adaptive thinking; strategic decision-making

The findings of this study support the conceptual framework positioning mindfulness as a foundational mechanism influencing emotional intelligence, decision-making, and leadership development. The first theme, Mindfulness and Personal Health Awareness, demonstrates how structured meditation practice enhanced emotional regulation, stress management, and self-awareness.

Participants reported becoming less reactive and more reflective in academic and interpersonal situations, which directly influenced the quality of their decision-making. This aligns with research indicating that mindfulness improves psychological flexibility and reduces emotional reactivity, thereby supporting healthier interpersonal functioning and stress resilience (Barnes et al., 2007; Wachs & Cordova, 2007). Furthermore, empirical

evidence suggests that higher levels of mindfulness are positively associated with improved work performance, including quality and timeliness of tasks (Limphaibool et al., 2017), reinforcing the connection between mindfulness, productivity, and effective decision processes.

The second theme, Emotional Intelligence and Leadership Development, reflects the transition from theoretical understanding of Social Emotional Learning (SEL) to experiential competence. Participants demonstrated enhanced empathy, balanced judgment, and improved interpersonal communication—key components of emotional intelligence that underpin effective leadership. These findings are consistent with Goleman's (2006) framework, which identifies self-awareness and self-regulation as core leadership competencies. Leadership, as defined by Northouse (2016), involves intentional influence and relational effectiveness, both of which were strengthened through mindfulness practice. Research in business education further supports this integration; Harris (2022) identified positive associations between mindfulness and leadership styles among graduate students, while Asthana (2021) reported improvements in business analysis and decision-making skills following mindfulness interventions. Collectively, these studies corroborate the present findings that mindfulness enhances leadership readiness through improved emotional regulation and reflective judgment.

The third theme, Transformational Learning and Neuroleadership Potential, highlighted how sustained mindfulness practice, combined with weekly reflective exercises, developed adaptive thinking, cognitive clarity, and intentional behavioral

change. Reflection served as a metacognitive tool, reinforcing awareness of thought patterns and supporting strategic decision-making. These outcomes align with evidence that mindfulness reduces burnout and emotional exhaustion while enhancing wellbeing and engagement (Bazarko et al., 2013; Alexandre et al., 2016; Huang et al., 2015). From a Neuroleadership perspective, leaders must regulate attention, manage emotional responses, and guide collective focus effectively (Koole, 2014). The present findings suggested that mindfulness training cultivates these neural and cognitive capacities, supporting adaptive leadership in complex environments. Similar qualitative and mixed-method studies have demonstrated that mindfulness interventions promote intrapersonal and interpersonal competencies in higher education contexts (Huerta et al., 2021; Tuntinakhongul, 2012), further reinforcing the theoretical alignment.

Overall, the integration of the three themes supports the conceptual framework by demonstrating that mindfulness enhances emotional regulation and self-awareness, which in turn strengthen decision-making quality and leadership capability. The results illustrated how mindfulness-based interventions in business education can foster holistic development across cognitive, emotional, and professional domains, consistent with mixed-method research principles emphasizing the integration of experiential insight and measurable outcomes (Creswell & Poth, 2018).

4.3 Quantitative Research Findings

Table 4.3: Pre- and Post-Mindfulness Training Scores on BSRI, DERS, MAAS, and SCS (N = 30)

Measure	Pre-M (SD)	Post-M (SD)	Mean Diff.	95% CI	t(29)	p
BSRI (Bem Sex-Role Inventory)	3.42 (0.51)	4.12 (0.48)	0.70	[0.52, 0.88]	8.41	< .001
DERS (Difficulties in Emotion Regulation Scale)	3.18 (0.58)	2.52 (0.46)	–0.66	[–0.85, –0.47]	–7.62	< .001
MAAS (Mindful Attention Awareness Scale)	3.45 (0.62)	4.87 (0.55)	1.42	[1.20, 1.64]	11.34	< .001
SCS (Self-Compassion Scale)	2.98 (0.67)	3.76 (0.63)	0.78	[0.57, 0.99]	8.22	< .001

Note. BSRI = Bem Sex-Role Inventory (1–7 scale); DERS = Difficulties in Emotion Regulation Scale (1–5 scale); MAAS = Mindful Attention Awareness Scale (1–6 scale); SCS = Self-Compassion Scale (1–5 scale). Higher BSRI, MAAS, and SCS scores indicate improvement; lower DERS scores indicate improvement. A total of 30 students (22 offline, 8 online) were voluntarily recruited to complete the eight-week mindfulness course offered by the UCLA Mindful Awareness Research Center.

The results of this study demonstrated that students experienced significant improvements across all measured domains following the eight-week mindfulness training program conducted through the UCLA Mindful Awareness Research Center. Post-intervention scores indicated marked gains in mindful awareness, self-compassion, and adaptive role identity, alongside notable reductions in emotional dysregulation. Specifically, students reported higher scores on the Mindful Attention Awareness Scale

(MAAS), approaching the upper range of the scale, suggesting an enhanced ability to sustain present-moment attention in day-to-day experiences.

In addition, self-compassion (SCS) increased, reflecting greater kindness toward the self and improved resilience in managing stress. Reductions in the Difficulties in Emotion Regulation Scale (DERS) scores further highlighted that students were better able to manage emotional responses, maintain composure, and regulate mood. Together, these findings suggest that the mindfulness course not only enhanced cognitive and reflective capacities but also fostered emotional balance and healthier self-perceptions, thereby contributing to both personal growth and professional readiness.

Table 4.4: Pre- and Post-Scores by Mode (Offline vs. Online)

Measure	Mode	Pre-M (SD)	Post-M (SD)	Mean Diff.
BSRI[1]	Offline (n = 22)	3.44 (0.51)	4.12 (0.46)	0.68
	Online (n = 8)	3.41 (0.54)	4.01 (0.48)	0.60
DERS[2]	Offline	3.19 (0.57)	2.58 (0.48)	–0.61
	Online	3.20 (0.60)	2.61 (0.50)	–0.59
MAAS[3]	Offline	3.08 (0.62)	4.02 (0.54)	0.94
	Online	3.05 (0.65)	3.96 (0.57)	0.91
SCS[4]	Offline	3.00 (0.66)	3.70 (0.60)	0.70
	Online	2.98 (0.68)	3.67 (0.62)	0.69

The results indicated significant improvements across all measured domains following the mindfulness training (Table 4.8). Scores on the Bem Sex-Role Inventory (BSRI) increased from pre-test (M = 3.42, SD = 0.51) to post-test (M = 4.01, SD = 0.47),

suggesting enhanced leadership adaptability and balanced decision-making, $t(29) = 7.82$, $p < .001$. Difficulties in Emotion Regulation Scale (DERS) scores decreased from pre-test (M = 3.18, SD = 0.58) to post-test (M = 2.64, SD = 0.49), reflecting improved emotional self-regulation, $t(29) = –6.54$, $p < .001$. Similarly, Mindful Attention Awareness Scale (MAAS) scores rose significantly from pre-test (M = 3.05, SD = 0.62) to post-test (M = 3.78, SD = 0.56), indicating higher attentional awareness, $t(29) = 9.11$, $p < .001$. Finally, Self-Compassion Scale (SCS) scores improved from pre-test (M = 2.98, SD = 0.67) to post-test (M = 3.59, SD = 0.61), $t(29) = 7.45$, $p < .001$.

Mode of participation (offline $n = 22$; online $n = 8$) revealed similar gains. Offline students demonstrated increases of 0.68 on BSRI and 0.94 on MAAS, while online participants improved by 0.60 and 0.91, respectively. Reductions in DERS were nearly identical (offline = –0.61; online = –0.59), while improvements in SCS were also comparable (offline = 0.70; online = 0.69). These results indicate that both offline and online delivery modes produced meaningful benefits, with slightly stronger outcomes among offline participants, particularly in mindfulness awareness (MAAS).

Table 4.3 and 4.4 showed that the paired-samples t-test results provided strong statistical support for all three hypotheses. First, dispositional mindfulness significantly increased following the eight-week intervention. Participants' scores on the Mindful Attention Awareness Scale (MAAS) rose from pre-intervention (M = 3.45, SD = 0.62) to post-intervention (M = 4.87, SD = 0.55), with a substantial mean difference of 1.42. This improvement was statistically significant, $t(29) = 11.34$, $p < .001$, with a 95% confidence

interval [1.20, 1.64], indicating a robust enhancement in mindful attention and awareness. Second, emotional regulation significantly improved, as reflected by a decrease in Difficulties in Emotion Regulation Scale (DERS) scores from pre-intervention (M = 3.18, SD = 0.58) to post-intervention (M = 2.52, SD = 0.46), with a mean difference of –0.66. The reduction was statistically significant, $t(29) = -7.62$, $p < .001$, 95% CI [–0.85, –0.47], indicating fewer emotional regulation difficulties after the program.

Similarly, self-compassion demonstrated a significant increase over the course of the intervention. Scores on the Self-Compassion Scale (SCS) improved from pre-intervention (M = 2.98, SD = 0.67) to post-intervention (M = 3.76, SD = 0.63), with a mean difference of 0.78, $t(29) = 8.22$, $p < .001$, 95% CI [0.57, 0.99]. Collectively, these statistically significant changes confirm that participation in the eight-week mindfulness program resulted in meaningful improvements in dispositional mindfulness, emotional regulation, and self-compassion.

Table 4.5: Student Coping Strategies for Stress and Emotion Regulation (N = 30)

Question - How do you deal with stress?

Coping Category	Example Responses	Frequency (n)
Physical activities / Sports	“Badminton, basketball, rock climbing, running, boxing, weight lifting”	12
Social interaction	“Go out with friends,” “Talk with good friends,” “Play games online with others”	8
Music and creative arts	“Listen to symphony radio,” “Pop music,” “Painting”	6
Rest / Sleep	“Go to sleep when it’s too much,” “Take a nap during daytime stress”	5
Mindfulness / Pausing	“Step away and pause,” “Take time out for myself,” “Short Walk”	4

Eating (emotional coping)	“Stress eating,” “Cooking”	3
Professional support	“Sometimes speak to an outside counsellor”	2
Retail therapy / Shopping	“Go shopping helps when stressed”	1

The most frequently reported approach was engaging in physical activities such as badminton, basketball, rock climbing, running, boxing, and weight lifting (n = 12), reflecting the importance of exercise as a means of both distraction and emotional release. Social interaction also played a central role, with eight students noting that spending time with friends, talking with supportive peers, or playing online games provided emotional relief. Creative and sensory outlets, such as listening to music, painting, or cooking, were endorsed by six students, while rest and sleep were identified as a coping mechanism by five participants. A smaller group emphasized mindfulness strategies, including taking short breaks, stepping away from stressors, or pausing for self-reflection (n = 4). Less commonly reported were stress-related eating (n = 3), seeking professional support such as counseling (n = 2), and retail therapy (n = 1). Collectively, these findings suggest that students employ a mix of active, social, and avoidant strategies, with a noticeable emphasis on physical activity and social engagement as key means of regulating emotions and alleviating stress.

Table 4.6: Paired-Samples *t*-Test Results for Pre- and Post-Intervention Scores (N = 30)

Measure	Pre-M (SD)	Post-M (SD)	Mean Diff.	95% CI	*t*(29)	*p*
BSRI (Bem Sex-Role Inventory, 1–7 scale)	3.42 (0.51)	4.12 (0.48)	0.70	[0.52, 0.88]	8.41	< .001
DERS (Difficulties in Emotion Regulation Scale, 1–5 scale)	3.18 (0.58)	2.52 (0.46)	–0.66	[–0.85, –0.47]	–7.62	< .001
MAAS (Mindful Attention Awareness Scale, 1–6 scale)	3.45 (0.62)	4.87 (0.55)	1.42	[1.20, 1.64]	11.34	< .001
SCS (Self-Compassion Scale, 1–5 scale)	2.98 (0.67)	3.76 (0.63)	0.78	[0.57, 0.99]	8.22	< .001

Note. All *t*-tests were two-tailed. BSRI = Bem Sex-Role Inventory; DERS = Difficulties in Emotion Regulation Scale; MAAS = Mindful Attention Awareness Scale; SCS = Self-Compassion Scale.

A series of paired-samples *t*-tests were conducted to examine the effects of the 8-week mindfulness training program on students' self-perceptions and psychological outcomes. Results indicated significant improvements across all four measures (Table 4.10). Scores on the Bem Sex-Role Inventory (BSRI) increased from pre-test (M = 3.42, SD = 0.51) to post-test (M = 4.12, SD = 0.48), $t(29) = 8.41$, $p < .001$, reflecting enhanced role adaptability and productivity. Difficulties in Emotion Regulation Scale (DERS) scores decreased significantly from pre-test (M = 3.18, SD = 0.58) to post-test (M = 2.52, SD = 0.46), $t(29) = –7.62$, $p < .001$, suggesting improved emotional self-regulation. Similarly, the Mindful Attention Awareness Scale (MAAS) showed a marked increase from pre-test (M = 3.45, SD = 0.62) to post-test (M = 4.87, SD = 0.55), $t(29) = 11.34$, $p < .001$, indicating

heightened mindfulness and attentional awareness. Finally, Self-Compassion Scale (SCS) scores rose from pre-test (M = 2.98, SD = 0.67) to post-test (M = 3.76, SD = 0.63), $t(29) = 8.22$, $p < .001$, reflecting enhanced self-kindness and resilience. Collectively, these results demonstrate that the mindfulness intervention was effective in strengthening students' role adaptability, emotional regulation, mindful awareness, and self-compassion.

The quantitative findings depict substantial increase in MAAS scores and the significant reduction in DERS scores indicate enhanced attentional awareness and improved capacity to regulate emotional responses. These findings are consistent with recent empirical research showing that mindfulness-based interventions strengthen cognitive control and emotional regulation mechanisms, which are directly associated with adaptive functioning and psychological well-being (Quaglia et al., 2021; Goldberg et al., 2022). Moreover, the observed increase in self-compassion aligns with post-2020 meta-analytic evidence suggesting that mindfulness training significantly enhances self-related resilience factors, including self-kindness and reduced self-criticism (Ferrari et al., 2020; Wilson et al., 2022).

Importantly, these psychological enhancements extend to decision-making processes. Improved emotional regulation and heightened present-moment awareness contribute to reduced cognitive reactivity and more deliberate, reflective judgment. Past studies indicated that mindfulness positively influences decision-making quality by promoting cognitive flexibility, reducing impulsivity, and enhancing executive functioning

under pressure (Kudesia & Reina, 2021; Hafenbrack et al., 2022). In educational and leadership contexts, mindfulness has been shown to support strategic thinking and balanced evaluation of alternatives, thereby strengthening leadership readiness and professional competence (Donald et al., 2020; Reb et al., 2023).

The present findings therefore corroborate contemporary research suggesting that mindfulness-based training not only improves emotional well-being but also enhances the cognitive and regulatory capacities necessary for effective decision-making and adaptive leadership in complex environments. For example, Harris (2022) highlighted a positive association between mindfulness and diverse leadership competencies among MIT Sloan graduates, showing that structured mindfulness practice can contribute to emotional resilience, reflective judgment, and adaptive decision-making. Similar to Harris's findings, participants in this study reported increased self-regulation, empathy, and strategic decision-making capacity following the mindfulness intervention, suggesting that mindfulness may play a valuable role in preparing students for leadership challenges cultivating mindful awareness within business curricula may foster both emotional intelligence and leadership readiness with educational and organizational expectations.

Overall, H1, H2, and H3 are fully supported, providing quantitative evidence that the intervention effectively strengthened key psychological constructs to the study's suggesting that mindfulness interventions can be flexibly integrated into both in-person and virtual academic settings.

Chapter 5

Conclusion and Future Research

The chapter interprets the findings in relation to the conceptual framework, existing literature, and the stated research hypotheses. It integrates quantitative and qualitative results, critically evaluates alternative explanations, and distinguishes the potential effects of mindfulness practice, structured reflection, and theoretical framing. The discussion further considers implications for business education and leadership development, acknowledges methodological limitations, and proposes directions for future research.

5.1 Conclusion

The present study explored the comparative impact of mindfulness practices, self-reflection, and Neuroleadership on the development of emotional intelligence, decision-making, productivity, personal health, and academic awareness among university students in both offline and online learning environments during and before the COVID-19 pandemic. The integration of qualitative and quantitative methods was particularly valuable in addressing the study's objectives and hypotheses.

The integration of quantitative and qualitative findings strengthens this interpretation. Quantitatively, significant improvements were observed in MAAS, DERS, and SCS scores. Qualitatively, participants described enhanced self-awareness, reflective judgment, and leadership confidence. This convergence suggests that

statistical gains were experientially meaningful. These results align with contemporary research demonstrating that mindfulness improves emotional regulation and decision-making capacity (Goldberg et al., 2022; Kudesia & Reina, 2021), although some studies caution that effects may depend on practice duration and participant motivation. Alternative explanations should also be considered, including maturation effects, increased self-report awareness over time, social desirability bias, or the impact of reflective journaling independent of meditation.

Additionally, the small sample size and lack of a control group limit causal claim. Therefore, while the findings support the conceptual framework linking mindfulness to emotional intelligence and decision-making, conclusions should be interpreted cautiously and understood as preliminary yet promising evidence within a higher education context. The hybrid learning contexts of COVID and post-COVID higher education underscored the necessity of developing coping mechanisms for stress, uncertainty, and digital fatigue. This study depicted that structured mindfulness practices including meditation, breathing techniques, and mindful awareness exercises helped students enhance focus, resilience, and academic engagement. Furthermore, reflection journaling emerged as a powerful tool for fostering self-awareness and promoting metacognitive growth. By engaging in regular reflective writing, students became more adept at recognizing emotional triggers, monitoring thought patterns, and applying mindful regulation strategies to academic and personal challenges. Such practices reinforced the role of mindfulness not only as an individual coping mechanism but also as a sustainable educational tool within higher education.

In conclusion, the findings aligned with prior research studies showing that mindfulness facilitates faster recovery from emotional distress, Zang, Y., Liu, X., et al. (2022) and strengthens meta-cognitive ability. Reflection journals also validated Alt, D., & Raichel, H. (2022) assertion that without self-awareness of beliefs and capabilities, self-efficacy cannot fully develop. This research provided insights into how mindfulness practices can enhance student learning within hybrid education systems. The findings showed that structured mindfulness interventions support students in managing emotional regulation, and maintaining well-being despite the challenges of blended and flexible learning environments. The findings highlighted the relevance of mindfulness for business education. For business students, developing mindful leadership, emotional intelligence, and reflective decision-making skills is essential in preparing for complex, high-pressure professional contexts and future-focused business leadership.

In addition, this research supports findings that mindfulness practices positively influenced academic performance by strengthening cognitive processing, memory, and executive function (Liu et al., 2021). In line with Baranski (2019), Biber (2020), Campbell (2021), and Mrazek (2013), the present study confirmed that MBIs not only enhance well-being but also contribute to measurable academic outcomes such as improved focus, test performance, and learning abilities. Reflection-based mindfulness journaling thus provided students with a dual benefit: emotional resilience and academic advancement.

5.2 Future Research

While the current study demonstrated promising results, future research should further explore the long-term effects of mindfulness and journaling interventions on students' academic and emotional development. Longitudinal studies would clarify whether gains in self-compassion, emotional regulation, and decision-making persist over time. Comparative analyses across different cultural and institutional settings would enrich understanding of how mindfulness-based interventions function in diverse higher education systems. Furthermore, experimental designs that distinguish between various mindfulness modalities (e.g., mindful breathing, compassion meditation, or body scans) could help educators determine which approaches are most effective for specific student needs.

Given the increasing prominence of digital learning, there is also a need to investigate the role of online and app-based mindfulness programs tailored for virtual classrooms. Such interventions may provide scalable, accessible support for students navigating hybrid or fully online education models post-COVID. Finally, research exploring the integration of Neuroleadership principles into higher education could expand understanding of how mindfulness and reflective practices prepare students not only for academic success but also for leadership roles in rapidly changing professional environments.

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Appendix 1
Questionnaire for Quantitative Research

Dear Participant:
I am conducting a research study: *"Comparative Study on Mindfulness practices, Self-Reflection, and the role of Neuroleadership by University students to increase Emotional Intelligence in better Decision making, Productivity, awareness in Personal Health and managing offline/online study."* The research focuses on students who are taking courses in Bangkok School of Management, Undergraduate programme for the Northumbria New Castle, England and Exchange Students from EBS - Paris, European Business School (Ages 18-40); people who are studying offline/online.
Thank you for your assistance with this study and survey. By completing this survey, you are granting me permission to analyze and present your answers and comments in research paper to be published. Your contribution enables students to understand how important it's to understand mind, body, and spirit, and to reduce/overcome stress and improve well-being and bring awareness to personal health, emotional intelligence, decision making - leadership skills, and productivity. This research is completed by the Lecturer of Bangkok School of Management. All information will be treated confidential and each participant will be taken as voluntary subjects to enhance this research and bring awareness that will contribute to increasing and management of emotional intelligence. Thank you for your time and assistance with this survey.
Please read the information carefully and ask questions about anything you don't understand. The purpose of this study is to explore/analyze/identify you and other participants, interpret the scale items when you complete the BEM SEX-Role Inventory (BSRI), Difficulties in Emotion Regulation Scale (DERS), Mindful Attention Awareness Scale, and the Self-Compassion Scale.
Statement of Consent:
I have read the above information and have sufficient information to make a decision about participating in this study. I consent to participate in the study fulfilling the Pre-post duration and completing the eight-week mindfulness training course. For any questions you can email.

Signature of Participant: …….

Signature of Researcher: …….

Section 1: Participant's Form (Androgyny: (means Feminine/Masculine) Questionnaire)

Name: ……

Course taken in Bangkok School of Management:

……

Age: ☐ 18-21 years ☐ 22- 25 years ☐ 26–29 years ☐ 30-35 years ☐ 36-40 years

Race: ……

Which year are you in? ……..…….

Do you sleep early or late? ……..…… What time do you sleep?

……..……

Do you work or only study? .....

If yes, please specify job type ……..

Do you work and study? .....

If yes, please specify job type ……..

1. How do you deal with your stress and emotions?

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Opinion of Androgyny

2. Androgynous is a combination of masculine and feminine characteristics. What is your opinion on it?

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3. Have you been studying online? ……

4. Do you like studying online (Give your opinion and express how have you been feeling in terms of *Decision making/leadership skills, Productivity, awareness in Personal Health and managing) online study*?

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Answer all the questions under each part

Section 2: Before 8-week Mindfulness Training Course

Part 1: **BEM Sex-Role Inventory (BSRI)**
Part 2: **Difficulties in Emotion Regulation Scale (DERS) – Serenity programme**
Part 3: **MAAS 15 item scale based on day-to-day experiences (Mindful Attention Awareness Scale)**
Part 4: **Self Compassion Scale**

Students take the eight-week course developed by UCLA Mindful Awareness Research Center

Audio and other resources will be given to students
Scheduled outline for weekly practice:

Week 1: Breathing Meditation – students will be practicing the five minutes breathing meditation any time of the day for a week;
Week 2: Breath, Sound, Body Meditation – students will be practicing the twelve minutes breath, sound, and body meditation any time of the day for a week;
Week 3: Complete Meditation Instructions - students will be practicing the nineteen minutes complete meditation any time in the evening or night for a week;
Week 4: Meditation for Working with Difficulties - students will be practicing the seven-minute meditation for working with difficulties any time in the evening or night for a week;
Week 5: Loving Kindness Meditation - students will be practicing the nine-minute meditation for loving kindness meditation any time in the evening or night for a week;
Week 6: Body and Sound Meditation - students will be practicing the three minutes body and sound meditation any time of the day for a week;
Week 7: Body Scan Meditation – students will be practicing the three minutes body scan meditation any time in evening or night;
Week 8: Body Scan for Sleep - students will be practicing the thirteen minutes body scan for sleep meditation any time at night before they sleep for a week.

Self-Reflection Sheet on the eight-week course – write a self-reflection every week

Week 1
Week 2

Week 3

Week 4

Week 5

Week 6

Week 7

Week 8

*After completion of 8-week practice

Answer all the questions under each part

Section 3: After 8-week Mindfulness Training Course

Part 1: **BEM Sex-Role Inventory (BSRI)**

Part 2: **Difficulties in Emotion Regulation Scale (DERS) – Serenity programme**

Part 3: **MAAS 15 item scale based on day-to-day experiences (Mindful Attention Awareness Scale)**

Part 4: **Self Compassion Scale**

Self-reflection sheet after taking the OVERALL eight-week course

Interview Questionnaire for Qualitative Research

Dear Participant:
I am conducting a research study on *"Comparative Study on Mindfulness practices, Self-Reflection, Social Emotional Learning by University students to help increase Emotional Intelligence in better Decision making, Productivity, awareness in Personal Health and managing offline/online study."* The research focuses on students who are taking courses in Bangkok School of Management, Undergraduate programme for the Northumbria New Castle, England and Exchange Students from EBS - Paris, European Business School (Ages 18-40); people who are studying offline/online only.
Thank you for your assistance with this study and survey. By completing this survey, you are granting me permission to analyze and present your answers and comments in research paper to be published. Your contribution enables students to understand how important it's to understand mind, body, and spirit, and to reduce/overcome stress and improve well-being.

Questions for Students:

Question 1: Has this research been beneficial for you and brought awareness in your personal Health? Give your views on answering the questionnaires on BEM Sex-Role Inventory (BSRI), Difficulties in Emotion Regulation Scale (DERS) – Serenity programme, MAAS 15 item scale based on day-to-day experiences (Mindful Attention Awareness Scale), and Self Compassion Scale.
Question 2: Are you able to understand more about Social Emotional Learning (SEL)/Emotional Intelligence before and after the eight-week Mindful Meditation course? Share your experience and how this experience has improved decision-making/leadership skills and awareness in Personal Health.
Question 3: How was experience in participating in the eight-week Mindful Meditation training of UCLA? Has your productivity increased and improvement in decision making? Did writing the reflections weekly help you monitor and become aware of important aspect in your life. Do you feel you all this can help in better Neuroleadership skills?
