

# Managing the Gen Z Workforce Through Growth Mindset

Master Thesis  
Akshat Kasana



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# Managing the Gen Z Workforce Through Growth Mindset

by

Akshat Kasana

Student Number: 5705908

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**Graduation Committee**

Chairperson:	Dr., R. Verburg - Values, Technology and Innovation
First Supervisor:	Dr., L. Rook - Values, Technology and Innovation
Second Supervisor:	Dr., I. Lefter - Multi-Actor Systems



# Summary

Gen Z, born between the mid-1990s and late-2000s, has unique workplace behaviours and expectations due to their upbringing in the digital age. This generation often lacks real-world work experience and necessary communication skills which can often lead to unrealistic job expectations and higher susceptibility to mental health issues. As a result, there is a considerable loss of human resources in the workplace which can be circumvented with better management of the Gen Z cohort. Adopting a growth mindset can help the Gen Z cohort navigate their issues in the modern workplace. Prevailing research on the application of mindset theory in the workplace posits a growth mindset helps sustain strong mental health in a hectic and stressful workplace. Consequently, a culture of growth mindset improves the productivity and leadership qualities of the employees.

This research investigates the extent of influence the growth mindset has on Gen Z employee attitude as well as the potential pitfalls of adopting such a mindset in the workplace. The study aims to investigate how mindset can impact the attitude of Gen Z individuals in the workplace, specifically focusing on their approach to challenges, preferences for work compensation, and levels of satisfaction. The study proposes that Gen Z employees with a growth mindset are more likely to take on challenging tasks and place greater importance on skill development in their compensation preferences. Additionally, the study anticipates that behavioural inhibition system (BIS) and behavioural approach system (BAS) personality traits will moderate the attitude and preference changes due to mindset adoption. To measure the effects of mindset interventions, the research utilizes a PreTest-PostTest experimental design to assess task choices, work compensation preferences, and satisfaction.

The results of the study reveal that participants with a growth mindset were significantly more likely to choose challenging tasks, aligning with mindset theory. However, the lack of significant change in skill development preferences underscores the challenge of fostering a genuine growth mindset. The interaction of mindset and BIS/BAS traits indicated complex underlying dynamics.

In conclusion, the study finds that promoting a growth mindset among Gen Z employees can positively impact their engagement with challenging tasks and overall satisfaction in the workplace. However, achieving a genuine growth mindset requires addressing both internal motivations and external compensation structures. The study acknowledges limitations, such as the small sample size and potential biases, and suggests further research to explore the interaction between mindset and BIS/BAS personality traits in more depth. The findings contribute to a deeper understanding of Gen Z's unique needs and preferences, offering valuable insights for developing effective management strategies tailored to this new generation of employees.

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# Nomenclature

Abbreviation	Definition
BAS	Behavioral Approach System
BIS	Behavioral Inhibition System
FM	Fixed Mindset
GM	Growth Mindset
RPG	Role Playing Game
Skill Points	Dependent variable which represents the Points assigned to Skill Development & Training option in the work-compensation plan.
Task Choice	Dependent variable which represents the chosen task between the Challenging Task or the Less-Challenging Task
WCP	Work-Compensation Preference
Work-Exp	Work Experience
YoB	Year of Birth

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# Introduction

## 1.1. Background

Organisations are confronted with a new composition of employees in the workforce as a new set of individuals becomes part of the workforce (Schroth, 2019). This new set of individuals is Gen Z also known as Generation Z. Gen Z is comprised of people born from the mid-1990s to late-2000s (Dimock, 2019). Entry of new generations into the workforce brings new values and expectations, which can contest existing norms (Joshi et al., 2011).

Gen Z has grown up with overprotective parenting and a culture of safety, which leads to a lack of real work experience at an early age (Schroth, 2019). This lack of real-world work experience leads to unrealistic job expectations. Gen Z is excessively prone to mental health issues due to job-induced stress. Stress at limited levels is said to be beneficial to organizations. However, stress in excess quantity can cause harmful effects on the body, mind and eventually workplace performance of Gen Z employees (Panigrahi et al., 2016).

The advent of the smartphone drastically changed social interaction amongst Gen Z. The introduction of smartphones has been shown to reduce the amount of face-to-face interactions that Gen Z individuals have with other people (Twenge, 2017). This can impair their ability to effectively communicate and interact with others, including the older generation in the workplace. Gen Z professionals, predominantly dependent on text messaging for communication, have overlooked essential aspects of conversation etiquette in the workplace. These overlooked areas include the art of active listening, adept questioning, respectful interjections, relationship cultivation, and conflict resolution (Schroth, 2019).

Mindset theory, developed by Carol Dweck, explores the impact of an individual's attitude about their abilities on their personal growth. Dweck identifies two main types of mindsets: *fixed mindset* and *growth mindset* (Dweck, 2006). Individuals with a fixed mindset believe that their abilities, intelligence, and talents are static traits that cannot change. In contrast, those with a growth mindset believe that abilities and intelligence can be developed through learning and embracing challenges. Gen Z employees do not deal well with setbacks when they have a fixed mindset in the workplace (Dweck, 2006).

Gen Z has less work experience than previous generations due to various factors, such as overall economic well-being, academic pressure, and competition in the job market. Gen Z has the highest rates of mental health issues, such as depression and anxiety, and this affects their motivation and leadership potential in workplaces (Schroth, 2019). Combining these issues with Gen Z's lack of communication skills in the workplace, can lead to serious roadblocks in their day-to-day well-being and very easily settling into a fixed mindset.

Inculcating a growth mindset in Gen Z employees is a possible solution to the major work-related Gen Z issues (Dweck, 2006; Wood and Bandura, 1989). Individuals who possess a growth mindset perceive workplace abilities as traits that can be cultivated, fostering a keen eagerness to acquire knowledge. Consequently, these individuals welcome challenges, exhibit perseverance in the face of setbacks and draw lessons from constructive feedback (Dweck, 2013). Furthermore, they find motivation in the achievements of others. Notably, individuals with a growth mindset demonstrate significantly higher levels of engagement in their roles as employees. As a result, the Gen Z cohort's problem of anxiety and stress management can be resolved with a healthy application of a growth mindset in the workplace (Dweck, 2006).

## 1.2. Problem Definition

Organizational mindset shapes organizational culture and organisational culture impacts employee satisfaction, company profits and productivity (Canning et al., 2020). Organizations that promote a growth mindset culture encourage employees to take on challenges and embrace learning opportunities (Delaney et al., 2014). This culture cultivates a sense of empowerment and ownership; leading to higher levels of engagement, creativity, and productivity among employees (Wood and Bandura, 1989). However, motivating Gen Z employees to adopt a growth mindset to solve workplace problems is easier said than done.

Firstly, changing one's mindset can lead to cognitive dissonance (Dweck, 2006; Harmon-Jones and Harmon-Jones, 2007). For instance, if someone with a fixed mindset begins to adopt a growth mindset, they may experience dissonance because their new attitude towards learning and challenges conflicts with their previous attitudes. Dissonance reduction can be accomplished in several ways which are addressed in the next chapter. The general understanding of the dissonance reduction process is based on achieving consistency among cognitions and behaviour. What are the potential attitude changes that could occur after the adoption of a growth mindset? How Gen Z approaches achieving consistency among their cognitions in the workplace needs to be studied.

Secondly, rewards can significantly influence attitudes in the workplace (Gerhart and Fang, 2015). By providing proper compensation to employees, organizations help employees align their new attitudes (growth mindset) with their new behaviours (skill development). However, what constitutes proper compensation in return for an employee adopting a growth mindset is not straightforward. Organisations provide a mixture of work-compensation packages and employees can tailor their compensation to their preferences. Thus, there is a need to study the preferences of Gen Z when it comes to work compensation. How the type of work-compensation package and employee attitude towards challenges and skill development related to each other needs to be studied for better management of the Gen Z professionals.

Finally, the environment plays a crucial role in stimulating individuals and eliciting responses based on their personality traits. The Behavioral Inhibition System (BIS) and Behavioral Approach System (BAS) theory of motivation, developed by psychologist Jeffrey Gray, explains how individuals respond to signs of potential punishment and/or rewards in their environment (Gray, 1990). The mindset theory suggests that challenges can be viewed as learning opportunities. Is it possible that a BAS-driven individual with a growth mindset would take on a challenge to gain new skills? Can learning a new skill be comprehended as the reward that draws a response from these individuals? A BAS-driven growth mindset employee can view taking on new challenges as a reward. A BIS-driven growth mindset employee can view not-taking a new challenge as a punishment or fear of being left behind. Thus, the interaction between BIS/BAS traits and mindset can influence how individuals approach challenges and pursue goals in workplaces. Understanding to what extent BIS/BAS personality traits and mindset influence decision-making provides valuable insights into how Gen Z employees approach challenges and setbacks in the workplace.

## 1.3. Research Objective

The incoming cohort of Gen Z employees needs to be managed effectively so that the potential within these individuals is used constructively in the workplace. By developing a growth mindset, the Gen Z cohort might be motivated to overcome problems relating to stress, anxiety and communication in the workplace. However, an individual is motivated by multiple internal and external mechanisms (Cerasoli et al., 2014). Mindset, cognitive dissonance and BIS/BAS personality traits can push an individual's attitude in a variety of directions. Therefore, this research will study the effects of adopting a growth mindset on Gen Z attitudes in the workplace.

Organisations have developed methods to orient employees towards a growth mindset (Murphy and Reeves, 2019). However, Gen Z is a fairly new cohort joining the workforce hence their response to the culture of growth mindset needs to be studied further. The medium and methods used to convey the concept of mindset within an organisation are outside the scope of this research. Rather, the focus will be on the attitude change towards setbacks, challenging tasks and work-compensation preferences after the adoption of a growth mindset.

The personality traits that motivate an individual to pursue/avoid potential rewards/threats are also relevant to this research. These behavioural systems impact the actions of employees in the workplace where the employees are presented with opportunities to improve their skills regularly. Thus, this research will also focus on the interaction between mindset and personality traits of an employee and how this interaction can influence Gen Z workplace attitudes.

When referring to Gen Z workplace attitude this research only focuses on two aspects of the Gen Z cohort. The first attitude aspect is their orientation towards challenging tasks in the workplace. How does a Gen Z employee approach setbacks and challenges in the workplace? This orientation (towards challenges) is relevant in the workplace because it influences the individual's mental health (Schroth, 2019) as well as performance in the workplace (Yip et al., 2020). The second attitude aspect is the Gen Z cohort's valuation and preference regarding work compensation. How does a Gen Z employee's work compensation preference change when they adopt a growth mindset in the workplace? Does the mindset influence the satisfaction an employee feels from their work compensation? Finding answers to these questions is relevant because it helps organisations develop meaningful compensations that go beyond economic values and improve the lives of Gen Z employees.

## 1.4. Research Question

**Main Research Question:** To what extent does adopting a growth mindset change the Gen Z cohort's attitude in the workplace and to what extent do BIS/BAS personality traits moderate this change?

**Research Sub-Question:**

- Sub-Question 1: To what extent does mindset influence the orientation of Gen Z employees towards challenges at the workplace?
- Sub-Question 2: To what extent does mindset influence Gen Z employees' valuation and preference regarding work compensation?
- Sub-Question 3: To what extent do BIS/BAS personality traits moderate the Gen Z cohort's attitude in the workplace due to a particular mindset?

The main research question along with the sub-questions encompasses all the aspects of the research objective. The aim is to investigate the effects of mindset on attitudes in the workplace. The focus will be on the attitude towards challenges and work compensation preferences. The moderating effect of BIS/BAS personality traits is also studied in this research.

## 1.5. Research Approach

In order to address the research questions and achieve the research objective, a structured research approach was followed, consisting of two main phases. The first phase involved conducting an extensive literature review to identify relevant articles and existing studies related to the research topic, as well as any knowledge gaps. The second phase of this research utilized an experimental design to trigger specific mindsets and measure the subsequent change in attitude of the participants. The experiment was conducted online to capture the attitude of Gen Z individuals in a simulated workplace environment. Finally, the statistical results obtained were utilized to address the research questions. The general research approach is established on the work of Katja Bouman and her research on Agent-based Negotiation Support (Bouman et al., 2022).

## 1.6. Research Relevance

Distress at work leads to a loss of productivity in organisations (McTernan et al., 2013; Tarafdar et al., 2007). Maintaining a growth mindset may help these young individuals improve their chances of fitting better in the workplace. At the same time, a growth mindset would help sustain strong mental health in a hectic and stressful workplace. Findings from this research would be able to shed light on these points.

From the perspective of organisations, firms would gain a better understanding of the Gen Z cohort. Organizations would be able to effectively differentiate between the impact of growth mindset initiatives and other motivational factors (such as leadership styles) on Gen Z employees' workplace attitudes. Organisations would be able to prepare work compensation plans that cater to the idea of learning from challenges. The firms would be able to better gauge the potential of an employee based on the type of compensation they choose during salary negotiations.

This research studies the influence of BIS/BAS personality traits on decision-making driven by a particular mindset. At the same time, this research also sheds light on how a Gen Z professional would go about reducing dissonance in their cognition once they have adopted a new attitude in the workplace. Hence, this research contributes to Mindset Theory, BIS/BAS Motivation Theory, and Cognitive Dissonance Theory. Finding a link between these theories would help in creating a unified theory of motivation-driven behaviour.

## 1.7. Report Structure

This report is divided into six chapters. Chapter 1: *Introduction* sets the stage by providing the background of the study, and outlining the problem definition, research objectives, and the research questions. It explains why the study is relevant, particularly in understanding the Gen Z workforce and how adopting a growth mindset can impact their workplace attitudes.

Chapter 2: *Literature Review* is crucial as it combines the literature review with the development of the conceptual model. It begins with an overview of the characteristics of Gen Z, followed by an exploration of mindset theory, cognitive dissonance, and BIS/BAS motivation theory. The conceptual model is then introduced, which ties together the different theories and sets the stage for the hypotheses tested in the research.

Chapter 3: *Research Methodology* details the research design, including the experimental setup, participant demographics, and data collection methods. The chapter provides a thorough explanation of the experiment, which includes the BIS/BAS personality trait measurement, mindset intervention, and the dependent variables such as task choice, work-compensation preference, and satisfaction.

Chapter 4: *Results* presents the findings of the research. It includes detailed results of the experiment. The results are supported by statistical analyses and are organized to align with the research questions and hypotheses.

Chapter 5: *Discussion* interprets the results in the context of the literature reviewed in Chapter 2. It explores the implications of the findings, particularly how they relate to managing Gen Z employees in the workplace. This chapter also addresses the limitations of the study and suggests areas for future research. The discussion connects the results back to the theoretical framework and highlights the practical implications for organizations.

Chapter 6: *Conclusion* summarizes the key findings of the study, concluding with the results on which hypotheses tested in this study are supported eventually.

# 2

## Literature Review

### 2.1. Gen Z

Mannheim (1970) laid the foundation for understanding generations as distinct social groups shaped by their shared experiences of significant historical events. Michael Dimock, president of the Pew Research Center, refers to generations as "a lens through which to understand societal change, rather than a label with which to oversimplify differences between groups" (Dimock, 2019, p.7). A generation is a cohort that includes people of a similar age and who have participated in a relatively identical period to the activity of the same system (White, 2013). In this particular research, people born between (and including) the years 1997 and 2012 are considered to belong to Gen Z (Dimock, 2019). The generation of people born before Gen Z are the Millennials (born 1981-1996) and the people born after Gen Z are Generation Alpha (born 2013-present).

The generations serve as a valuable lens through which to examine societal evolution, offering insights into the influences, values, and common experiences that shape distinct age cohorts (Popescu, 2019). Gen Z is the first generation to have grown up entirely in the digital age. Gen Z is also referred to as the iGeneration because these individuals came of age during the meteoric rise of smartphones and social media (Dimock, 2019). They are characterized by their fluency with technology (White, 2013). Multitasking is a characteristic of Gen Z, shaped by their upbringing and exposure to various forms of technology from a young age. Gen Z individuals are adept at managing multiple tasks, activities, and information simultaneously.

There is an inherent potential for conflict between different generations within an organization, which can arise from differences in values, attitudes, and experiences that are shaped by their unique positions in time (Joshi et al., 2011). Younger generations, typically more attuned to new trends and technologies, can push for innovative changes that might be resisted by more established older generations. Organizations must adapt to these demographic changes by developing strategies that address the unique challenges posed by different generations in the workforce. This includes creating age-friendly workplaces, fostering inter-generational collaboration, and ensuring that policies do not inadvertently favour one generation over another (North and Fiske, 2015). Another strategy involves developing a culture of continuous learning where employees are encouraged to update their skills and knowledge regularly. This not only helps older employees stay relevant in a rapidly changing technological landscape but also ensures that younger employees understand the broader organizational context in which they are operating (Joshi et al., 2011).

While Gen Z shares many traits with the Millennial Generation, they also bring in new patterns of behaviour and attitudes (Schroth, 2019). Gen Z, unlike millennials, mentions the fear of failing in a leadership role (34%) and a lack of confidence required to lead (33%) as the main reasons they would not take on more leadership responsibility in their roles (Bresman and Rao, 2018). As a result, it leads to a loss of productivity as well as innovation in the workplace. Organisations that convey on multiple occasions that values such as continuous learning, effort, and perseverance are necessary have shown considerable improvements in productivity and innovation (Dweck, 2006). At the same time communicating that mistakes are inevitable in the workplace but should be learned from is critically important for developing the incoming cohort of Gen Z employees (Schroth, 2019).

## 2.2. Mindset Theory

Mindset theory, developed by psychologist Carol Dweck, explores how individuals' approach to their abilities and intelligence impact their behaviour and success. A growth mindset refers to the belief that abilities (skills) and intelligence can be developed through dedication and effort (Dweck, 2006). A fixed mindset refers to the belief that abilities (skills) and intelligence are static and cannot be significantly developed.

The mindset theory posits that the important reason why one does challenging work is that one learns new things (Rammstedt et al., 2022). Individuals with a growth mindset embrace challenges, persist in the face of failure, and view challenging tasks as opportunities for learning (Keating and Heslin, 2015). However, individuals with a fixed mindset view challenging tasks as threats to their self-esteem or proof of their limitations. They may avoid challenges altogether, give up easily when faced with obstacles, or become discouraged by criticism (Dweck, 2013).

Individuals with a growth mindset tend to exhibit higher levels of motivation and adaptability in the workplace (Nalipay et al., 2021). Employees with a growth mindset are more likely to seek out feedback, learn from their mistakes, and actively pursue opportunities for improvement (Keating and Heslin, 2015). For Gen Z who are entering the workforce amidst rapid technological advancements and economic uncertainty, a growth mindset is essential for navigating challenges and seizing opportunities. Embracing a growth mindset empowers Gen Z individuals to adapt to change, learn new skills, and pursue their aspirations with confidence (Dweck, 2015).

Despite the benefits of a growth mindset, some individuals may exhibit a false growth mindset, where they merely pay lip service to the idea of growth without embodying its principles (Dweck, 2015). This can manifest as a superficial willingness to take on challenges or seek feedback without a genuine commitment to learning and improvement (Barger et al., 2022). If organisations do not identify a false growth mindset at the appropriate time, it could lead to a loss of productivity and resources. Not to mention the loss of opportunity for individuals who could have been given the opportunity instead.

A genuine growth mindset is difficult to notice because it is more than just a belief - it is a practice that requires consistent effort and perseverance. Sometimes, individuals may display behaviours associated with a growth mindset, such as seeking challenges or embracing failure, but may lack the genuine attitude or commitment to grow and develop truly. Additionally, a false growth mindset may be mistaken for a genuine growth mindset, as a real growth mindset often manifests in subtle, incremental changes over time (Dweck, 2015). This perspective shift can be observed in their attitude towards challenges. A person with a genuine growth mindset would seek challenges to learn and improve their skills and abilities (Memari et al., 2024).

## 2.3. Cognitive Dissonance

Cognitive dissonance theory, developed by social psychologist Leon Festinger, explains the psychological discomfort experienced when an individual holds two or more conflicting beliefs or attitudes (Festinger, 1962). The theory helps in understanding how people strive for internal coherence in cognition and how they resolve contradictions in their thoughts and actions (Harmon-Jones and Harmon-Jones, 2007). Cognitive dissonance plays a significant role in attitude change and behaviour modification once a decision has been made by an individual (Harmon-Jones and Mills, 1999).

When the dissonance magnitude is too big, and the situation novel, people might disengage rather quickly (leaving the situation or distracting themselves). If, however, people have enough motivation and cognitive capacity, they might engage more in the reduction processes (Cancino Montecinos, 2020). An external stimulus (such as a training program) can motivate a person to engage in counter-attitude behaviour (adopting a growth mindset) if they believe that the potential reward/punishment from adopting the growth mindset is worth the extra psychological work (Harmon-Jones et al., 2024; Yeager and Walton, 2011). However, when a person engages in counter-attitude behaviour, dissonance is created between the original attitude and the counter-attitude behaviour. Dissonance theory presents three major methods to reduce the inconsistency in cognition (McGrath, 2017):

1. **Changing Attitudes: Altering existing attitudes to make them consistent with new behaviours.**  
In the workplace context, after adopting the growth mindset, Gen Z employees change their

attitude towards setbacks. Gen Z employees with a growth mindset see setbacks as a source of new learning rather than a declaration of defeat (Dweck, 2006).

2. **Changing Behaviours: Modifying behaviours to align with new attitudes and beliefs.** In the workplace context, after adopting the growth mindset, Gen Z employees change their behaviours towards challenging tasks. Gen Z employees with a growth mindset are more inclined to take on more responsibilities and leadership roles (Dweck, 2006).
3. **Adding New Cognition: Introducing new thoughts or beliefs that reconcile the inconsistencies between the existing cognitions.** Gen Z employees create new cognition highlighting the importance of continuous learning. In the workplace context, after adopting the growth mindset, Gen Z employees actively look for ways to learn new skills (Dweck, 2006).

Organisations want Gen Z to engage in counter-attitude behaviour without getting caught up in anxiety and stress (Schroth, 2019). Hence, understanding how Gen Z approaches achieving consistency among their cognitions in the workplace is fairly important for this research. If the dissonance reduction does not take place properly in the workplace then the employee's performance is hampered due to psychological discomfort. A genuine growth mindset requires a shift in attitude for a sustained period of time (Dweck, 2015). Hence, mechanisms for reducing cognitive dissonance should further encourage the adoption of a growth mindset to ensure the development of a genuine growth mindset.

## 2.4. BIS/BAS Motivation Theory

The BIS/BAS personality theory, developed by Jeffrey Gray, proposes that individuals differ in the sensitivity of two neural systems: the Behavioral Inhibition System (BIS) and the Behavioral Approach System (BAS). These systems play a fundamental role in regulating approach (in case of rewards) and avoidance (in case of punishment) in individuals (Gray, 1990).

The BIS is responsible for detecting and responding to cues of potential punishment or threat in the environment. The BAS is responsible for detecting and responding to cues of potential reward or pleasure in the environment. High BIS sensitivity is associated with traits such as neuroticism, anxiety, and avoidance behaviour (Lang et al., 1990). High BAS sensitivity is associated with traits such as extraversion, impulsivity, and reward-seeking behaviour (Depue and Collins, 1999).

The mindset theory motivates the individual to consider the potential new learning that can be gained from a challenge and approach the challenge accordingly. The BIS/BAS traits are based on the natural inclination of an individual to pursue/avoid a potential reward/punishment. Is it possible that a BAS-driven individual with a growth mindset would take on a challenge to gain new skills? Can learning a new skill be understood as the reward that draws a response from these individuals? In a similar vein, is it possible that a BIS-driven individual with a growth mindset would take on a challenge to avoid missing out on an opportunity to develop themselves? However, one could argue that BIS-driven individuals with a growth mindset would be more careful when taking on a new challenge for their skill development.

Thus, a specific mindset (fixed or growth) would be more genuine in individuals in a given situation if their BIS/BAS personality trait is also triggered in the said situation. In other words, the BIS/BAS traits would complement a specific mindset in a given task, resulting in less dissonance. At the same time, the opposite is also possible. One could argue a larger dissonance would be created if a mindset, opposite to the BIS/BAS personality trait, is recommended to an employee in a particular situation. External stimulus, like the promise of a reward or the fear of missing out on an opportunity, can encourage an employee to engage in behaviours that are at odds with their original beliefs even if there is a substantial amount of cognitive dissonance. Growth mindset theory acknowledges the fact that all individuals exist on a continuum ranging from a fixed mindset at one end to a growth mindset at the other end (Dweck, 2017). Hence, the combined effects of mindset and personality traits within an individual need to be examined to study the effects on their orientation towards challenging tasks in a workplace setting.

## 2.5. Research Gap

Adopting a new mindset towards setbacks and challenges in the workplace may cause cognitive dissonance. Based on the methods of dissonance reduction, a genuine growth mindset would change



attitude towards setbacks, and challenges for learning and create new cognition to highlight the importance of skill development and training as a work-compensation medium. These ideas will be tested and examined in this research.

This research aims to fill the research gap at the intersection of Mindset Theory, BIS/BAS Motivation Theory, Cognitive Dissonance Theory, and the management of Gen Z employees. It will explore how mindset could influence attitude in the workplace. Does the alignment of the process of reducing cognitive dissonance with the BIS/BAS triggers of reward and punishment make it easier to adopt a genuine growth mindset in the long run? The specific interplay between these theories in the context of managing Gen Z employees remains underexplored. The work compensation preference of Gen Z professionals after adopting a particular mindset remains to be studied. Understanding how these theoretical frameworks interact can provide deeper insights into how Gen Z employees approach challenges, perceive work compensation, and are influenced by their personality traits, thereby informing more effective management strategies tailored to this cohort's unique needs and preferences.

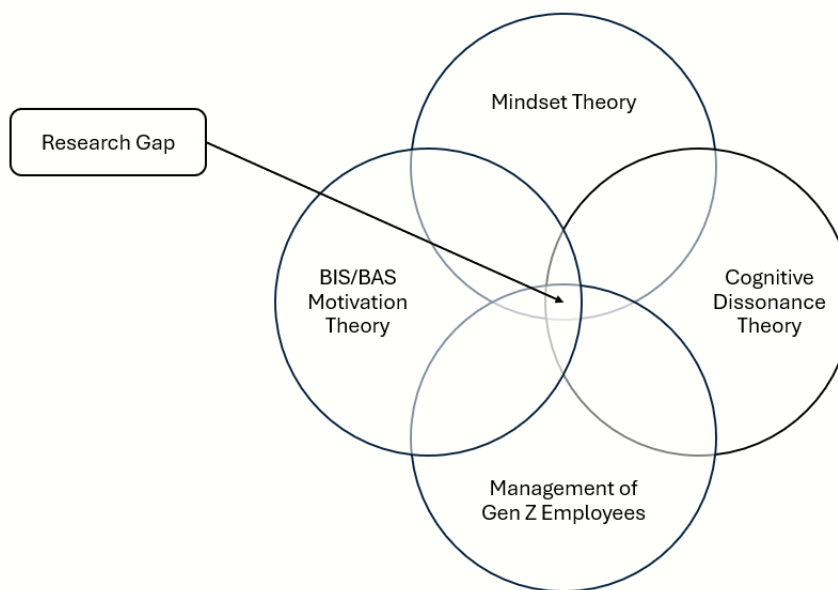


Figure 2.1: Research Gap

## 2.6. Conceptual Model

This conceptual model studies workplace attitudes in three main areas. Task Choice represents the type of tasks (challenging or easy) individuals choose to engage in the workplace. Task Choice is essentially an individual's orientation towards challenges. An inclination towards a challenging task would showcase a growth mindset as they approach challenges for skill development and learning. Work compensation refers to the type of compensation individuals receive for their work. It includes the six types of compensation options that are explained later in this chapter. Satisfaction refers to the satisfaction levels of an employee from the final work compensation package for their work.

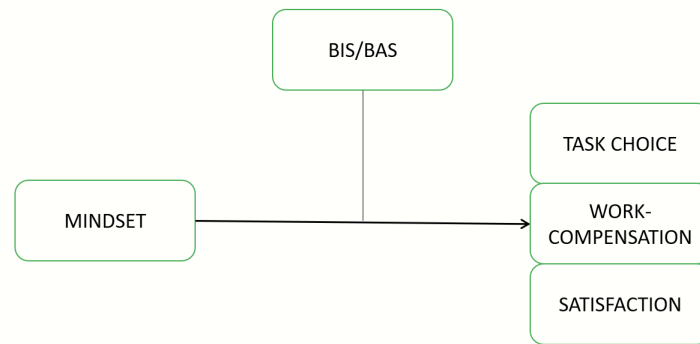


Figure 2.2: Conceptual Model

## 2.7. Dependent Variables

This section describes the dependent variables considered in this research.

### Task Choice

This research focuses on attitude change in Gen Z individuals after adopting a particular mindset in the workplace. The orientation of Gen Z employees towards challenges in the workplace is operationalized as the *Task Choice*. The Task Choice represents an individual's selection between a challenging task and a less challenging one. Based on the mindset theory, an individual with a growth mindset is more likely to take on a challenging task because they believe that there is an opportunity to learn from the challenge. When faced with a setback or failure in the said challenge, an individual with a growth mindset is more likely to have a positive outlook on the outcome than an individual with a fixed mindset.

### Work Compensation Preference

Understanding the work compensation options available to Gen Z, their preferences among these options and how mindset affects these preferences is crucial for organizations aiming to attract and retain Gen Z talent (Pandita, 2022). By offering a combination of competitive salaries, meaningful work, and growth opportunities, companies can effectively meet the diverse needs of this new workforce (Aggarwal et al., 2022). However, the pitfall of a false growth mindset exists where organisations are unable to differentiate between a genuine growth mindset and a false growth mindset.

Examining the work-compensation preferences of Gen Z employees instead would provide a better picture of the employee's attitude towards learning. Instead of using work compensation as a means to justify the adoption of a growth mindset, work compensation should be used as a yardstick to see if the employee embodies the ideas of continuous learning by taking part in training programs and skill development. The importance of training programs as a work compensation medium for a Gen Z employee provides a good benchmark for measuring the employee's attitude towards learning and skill development (Dweck, 2006).

The 6 work compensation options considered in this research are described below:

1. **Salary:** monthly, fixed payments made to employees for their work.
2. **Work-Life Balance:** flexibility in working from home in a week.
3. **Skill Development & Training:** programs to help employees enhance their skills and competencies.
4. **Paid time-off:** vacation days and personal leaves.
5. **Company-Stock:** the option to purchase company stock at a reduced price.
6. **Health & Wellness Benefits:** medical insurance and access to gyms/fitness programs.

The employee's work compensation preference refers to the composition of their chosen compensation plan between the six options considered in this research. Which of the six options do they find more important than the other option provides insight into their values and personal goals (Cable and Judge, 1994; Ward, 2024). Based on mindset theory, an employee with a genuine growth mindset values continuous skill development highly.

### **Satisfaction**

An employee's valuation of work compensation in this research refers to how much an employee feels satisfied with the work compensation received. When individuals exert high effort to obtain a reward, they tend to value the reward more. This process, known as effort justification, posits that greater effort leads to higher reward valuations to reduce dissonance (Harmon-Jones et al., 2024). This research examines if an employee with a growth mindset takes on a challenging role, does this employee feel more satisfied with their work compensation? To what extent effort justification influences the satisfaction levels of an employee once they adopt a growth or fixed mindset remains to be seen.

## **2.8. Hypothesis Development**

Based on the Mindset Theory by Carol Dweck the following hypothesis has been developed regarding Gen Z behaviour after adopting a growth mindset in the workplace.

### **Task Choice Hypothesis:**

**Mindset Main Effect:** This research predicts an increase in Gen Z employees choosing challenging tasks after adopting a growth mindset in the workplace.

**BIS Main Effect:** This research predicts that the change in Gen Z employees' Task Choice is influenced by their BIS traits.

**BAS Main Effect:** This research predicts that the change in Gen Z employees' Task Choice is influenced by their BAS traits.

### **Work Compensation Hypothesis:**

**Mindset Main Effect:** This research predicts that the importance of Skill Development & Training as a work compensation medium increases after adopting a growth mindset in the workplace.

**BIS Moderation:** This research predicts that the increase in the importance of Skill Development & Training as a work compensation medium after adopting a growth mindset is moderated by the BIS traits.

**BAS Moderation:** This research predicts that the increase in the importance of Skill Development & Training as a work compensation medium after adopting a growth mindset is moderated by the BAS traits.

### **Satisfaction Hypothesis:**

**Mindset Main Effect:** This research predicts that Gen Z employees report higher satisfaction levels from their chosen work-compensation plans after adopting a growth mindset in the workplace.

**BIS Moderation:** This research predicts that an increase in satisfaction levels after adopting a growth mindset is moderated by the BIS traits.

**BAS Moderation:** This research predicts that an increase in satisfaction levels after adopting a growth mindset is moderated by the BAS traits.

# Research Methodology

## 3.1. Ethics Approval

The Human Research and Ethics Committee (HREC) of TU Delft approved the experiment design and data management plan.

## 3.2. Experiment Overview

The online experiment was a PreTest-PostTest study to measure the *Work-Compensation Preference*, *Task-Choice* and *Satisfaction* of Gen Z individuals. First, the experiment collected the BIS/BAS personality traits of the participants using the measurement scales developed by Carver and White, 1994. Then, the participants went through an interactive game where they adopted the role of a young professional starting a new job. A mindset intervention was used to trigger either a growth or a fixed mindset in the participants. Within a particular mindset condition (growth or fixed), the dependent variables for a subject were measured before and after the mindset intervention to achieve a within-subject design to study the changes in the dependent variable. At the same time, the experiment also allowed for a between-subject design as comparisons could be made between the two mindset conditions. Finally, the participants' demographic data was collected. The participants were debriefed about the theories tested in the experiment.

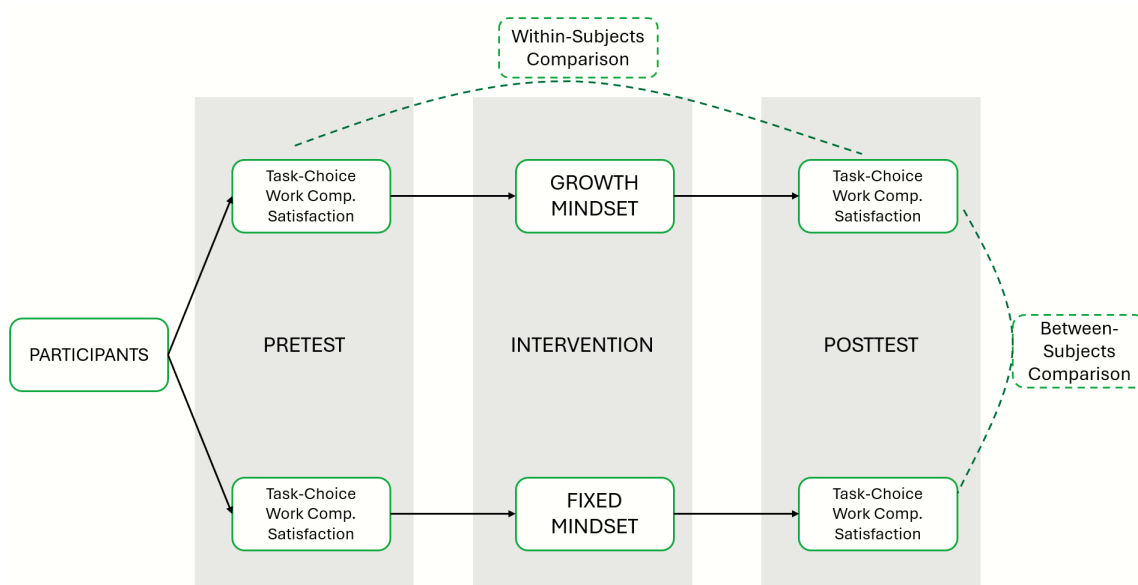


Figure 3.1: Experiment Design

### 3.3. Participants

The participants were recruited through *Prolific.com*. Prolific is an online platform used to conduct online research and collect data from participants. The platform provides access to reliable participants for academic research. The online experiment was designed and deployed through *Qualtrics.com*. The participants remained anonymous during the experiment to ensure privacy.

A language and an age filter were applied to include participants who were fluent in English and older than 18 years. Participants voluntarily chose to participate in the experiment and were paid compensation based on the time it took to complete the experiment. A total of 74 participants completed the experiment. Five participants failed both manipulation checks of the mindset intervention. Their data was excluded from the study. The final sample consisted of 69 participants. 33 participants underwent fixed mindset intervention and 36 participants underwent growth mindset intervention.

Almost 60% of the participants were female. More than 70% participants were born between 1997 and 2002 providing a good representation of the Gen Z cohort. Roughly 60% of the participants had work experience of 2 or more years. Whereas the remaining 40% had 0 to 2 years of work experience. The maximum proportion of the participants was British (36%), followed by Canadians (23%) and South Africans (17%). 10 different nationalities participated in the experiment. The following tables present the descriptive statistics for the final sample. The split in the final sample between the two mindset interventions is included in Appendix A.

Gender	Frequency	Percent
Male	27	39.130
Female	41	59.420
Non-Binary	1	1.449
Missing	0	0.000
Total	69	100.000

**Table 3.1:** Frequencies for Gender

YoB	Frequency	Percent
1994	1	1.449
1996	4	5.797
1997	8	11.594
1998	9	13.043
1999	6	8.696
2000	13	18.841
2001	8	11.594
2002	8	11.594
2003	5	7.246
2004	3	4.348
2006	4	5.797
Missing	0	0.000
Total	69	100.000

**Table 3.2:** Frequencies for Year of Birth

Work_Exp	Frequency	Percent
0 to 1 Year	11	15.942
1 to 2 Years	16	23.188
2 to 4 Years	21	30.435
4+ Years	21	30.435
Missing	0	0.000
Total	69	100.000

**Table 3.3:** Frequencies for Work Experience

Nationality	Frequency	Percent
American	6	8.696
British	25	36.232
Canadian	16	23.188
Filipino	2	2.899
Israeli	1	1.449
Kenyan	1	1.449
Nigerian	4	5.797
South African	12	17.391
Ugandan	1	1.449
Australian	1	1.449
Missing	0	0.000
Total	69	100.000

**Table 3.4:** Frequencies for Nationality

### 3.4. Research Procedure

The experiment was divided into three main sections. The participants moved from one section of the experiment to the next in a linear order.

1. **Pre-Game Data Collection:** This section included the Opening Statement and the Informed consent. Also, the BIS/BAS characteristics were recorded in this section.
2. **The Interactive Game:** This section included the instructions for the game and the game itself. The dependent variables were recorded at various stages in the game. The dependent variables were not explicitly described to the participants.
3. **Post-Game Data Collection:** This section included the manipulation checks and the experiment debriefing. The participants' demographic data was also collected in this section.

#### The Interactive Game

##### Inspiration:

The objective of the experiment was to recreate a workplace environment in a controlled setting to observe the behaviours of Gen Z employees in various scenarios. For this research, inspiration was taken from role-playing games (RPGs) where the players are presented with a scenario and the players are required to provide their responses in the said scenarios. There is a clearly defined objective, such as maximising score or minimising time, that the player must achieve by responding to the scenarios provided by the game.

The player could play these games as a character with its own set of skills and abilities. On the other hand, the RPG could also be played by the players as themselves responding to hypothetical situations. Within these games, the scenarios can mimic real-world situations and the player would respond based on their personalities and attitudes (Williams et al., 2018).

The player is aware that the action taken in one scenario will have an effect on the next scenario. This awareness within the player allows the creation of stakes that the player cares about even in a simulated environment. By raising or lowering the stakes, the player can be put into positions of advantage or disadvantage within the game. The player in their pursuit to achieve the objective of the game show aspects of their personality through the decisions they make in the game (Bowman and Lieberoth, 2018). Thus, capturing the attitude of a player in a critical scenario becomes possible.

#### Implementation:

The participants of the experiment role-play as an employee starting a new job. The participants were aware that their decisions in one scenario would have an influence on the later scenarios in the game. The participants were given a work-compensation plan in the form of 120 *Points*. The participants were free to allocate these 120 *Points* into six options according to their preferences.

The participants were instructed that the core aspect of the game was to choose a task and gain *Points* by successfully completing the task. The participants were told that their objective was to maximise the number of *Points* they could score by the end of the game. However, this research is not focused on the number of *Points* scored by the participants. In reality, where the participants would gain and lose *Points* was a part of the experiment's design from the beginning.

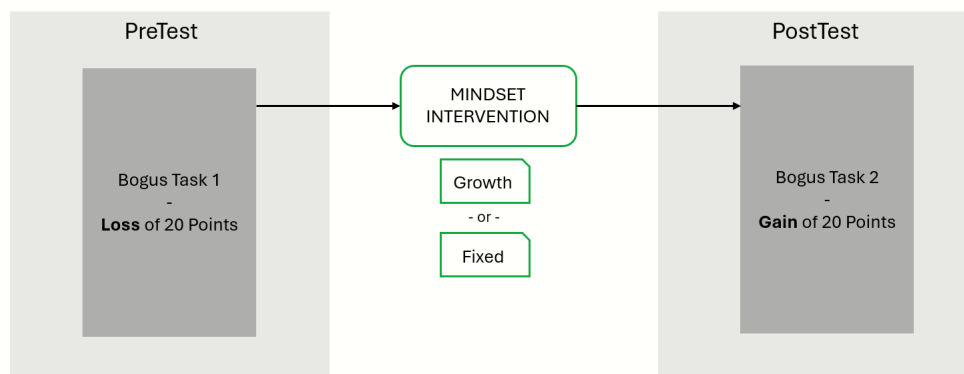


Figure 3.2: Points Flowchart

In other words, the participants would fail their first task and succeed in their second task. Losing points before the mindset intervention puts the participant in a state of setback at the workplace. The participants would have encountered a task and failed to do it properly. Because the participants were not aware the points were reduced by design, they would register the setback (loss of *Points*) as a result of their choices and abilities. At this point, the mindset (growth or fixed) regarding learning capabilities and orientation towards challenges was explained to the participants.

After the intervention, the participants would gain 20 points and be in a state of success in the workplace. Because the participants were not aware the points were increased by design, they would register the success (gain of *Points*) as a result of their choices, abilities and newly learned mindset.

### 3.5. Mindset Intervention

Mindset interventions have been designed based on comprehension of a text in previous mindset research (Hong et al., 1999; Dweck and Yeager, 2019). The same concept of reading and summarizing a piece of text was used in this research experiment.

To trigger a particular mindset, the interventions used in previous mindset research were based on three core concepts: the Theory of Intelligence, Learning Goals and Effort Beliefs (Hong et al., 1999; Dweck and Yeager, 2019). The Theory of Intelligence implies that a person can always greatly change how intelligent they are. The orientation on Learning Goals posits that the important reason why one does challenging work is that one learns new things. Finally, the concept of Effort Beliefs points out

that the harder one works at something, the better one will be at it. Based on these three core tenets of growth mindset theory, a short comprehension-passage of roughly 200 words was created. Similarly, the opposite of these tenets were used to create a comprehension-passage of roughly 200 words for fixed mindset as well.

A scenario was included in the game where the participant attended a seminar at their new job. The participants did not actually attend a seminar within the game. Rather, they were presented with the comprehension passage (mindset intervention) which represented the seminar in the context of the game. The participants were then asked to summarise the key concepts of the seminar (i.e. the comprehension passage) to their teammates at their job by writing a short text message to them within the game.

The participants were either exposed to a growth mindset intervention or a fixed mindset intervention. The exact intervention passage utilised in the experiment are included in Appendix A. A key point to remember is that the participants were put into a setback (loss of 20 Points) in the workplace before they were manipulated with the mindset intervention. After the mindset intervention, the participants were put into a successful position (gain of 20 Points) in the workplace.

## 3.6. Measures

### 3.6.1. BIS/BAS:

The BIS/BAS personality traits were measured using the 24-item scale developed by Carver and White, 1994. The participants either agree or disagree on a four-point Likert scale (from 1: “very true for me” to 4: “very false for me”) as shown in Appendix A. The BIS/BAS item scores can be split into two, four or five dimensions; depending on how the items load in a factor analysis. The factor analysis showed that BIS loaded consistently on one factor. However, the BAS was split into two factors. Running uni-dimensional reliability analysis showed that the 7 items of BIS had high reliability (Cronbach’s  $\alpha = 0.839$ ) and 13 items of BAS had acceptable reliability (Cronbach’s  $\alpha = 0.744$ ). Given these outcomes, it was decided to study the BIS/BAS personality traits in two dimensions (combined BAS and BIS).

	RC1	RC2	RC3	Uniqueness
q2_BIS_F	0.787	-0.066	-0.067	0.371
q3_BAS_D	0.006	0.719	0.049	0.463
q4_BAS_R	-0.231	0.550	-0.341	0.633
q5_BAS_F	-0.170	0.345	0.222	0.768
q7_BAS_R	0.188	0.585	0.065	0.592
q8_BIS_A	0.700	-0.060	0.199	0.483
q9_BAS_D	-0.077	0.779	-0.151	0.426
q10_BAS_F	-0.038	-0.201	0.850	0.316
q12_BAS_D	-0.102	0.768	-0.067	0.427
q13_BIS_A	0.807	0.032	0.097	0.339
q14_BAS_R	0.329	0.649	-0.030	0.463
q15_BAS_F	0.125	-0.164	0.813	0.368
q16_BIS_F	0.780	0.105	0.055	0.371
q18_BAS_R	0.118	0.487	0.030	0.737
q19_BIS_A	0.659	0.324	-0.180	0.433
q20_BAS_F	0.007	0.238	0.736	0.317
q21_BAS_D	-0.359	0.296	0.415	0.552
q22_BIS_F	0.638	-0.194	-0.099	0.543
q23_BAS_R	0.226	0.336	0.236	0.740
q24_BIS_A	0.602	-0.019	-0.026	0.636

Table 3.5: Component Loadings for BIS/BAS Items



Estimate	Cronbach's $\alpha$
Point estimate	0.839
95% CI lower bound	0.772
95% CI upper bound	0.890

**Table 3.6:** Frequentist Scale Reliability Statistics - BIS

Estimate	Cronbach's $\alpha$
Point estimate	0.744
95% CI lower bound	0.640
95% CI upper bound	0.824

**Table 3.7:** Frequentist Scale Reliability Statistics - BAS

### 3.6.2. Task-Choice

The participants were instructed that the core aspect of the game was to choose a task and gain *Points* by successfully completing the task. The participants could choose a "Challenging Task" or a "Less Challenging Task". The Challenging Task was defined as requiring high effort and out-of-scope skills; typically an uncomfortable task. The Less Challenging Task was defined as requiring sufficient effort and within-scope skills; typically a comfortable task. The most important point to note here is that the participants were informed both tasks are worth the same number of Points.

Failure to do the task properly will lead to a **reduction** of Points. Proper completion of the chosen task will help you **gain** Points.

However, interestingly, both tasks are **worth the same** number of Points.

Decide which task you should do...

- Challenging Task: High effort, out-of-scope skills required, uncomfortable task.
- Less Challenging Task: Sufficient effort, within-scope skills required, comfortable task.

**Figure 3.3:** Task Choice options as presented in the game

By making both tasks worth the same number of points, any other difference apart from the level of challenge is removed from the choices. However, the participants were presented with the same bogus task regardless of their Task Choice. In the case of the PreTest, doing the bogus task resulted in a loss of 20 Points. In the case of the PostTest, doing the bogus task resulted in a gain of 20 Points. The bogus tasks are included in Appendix A.

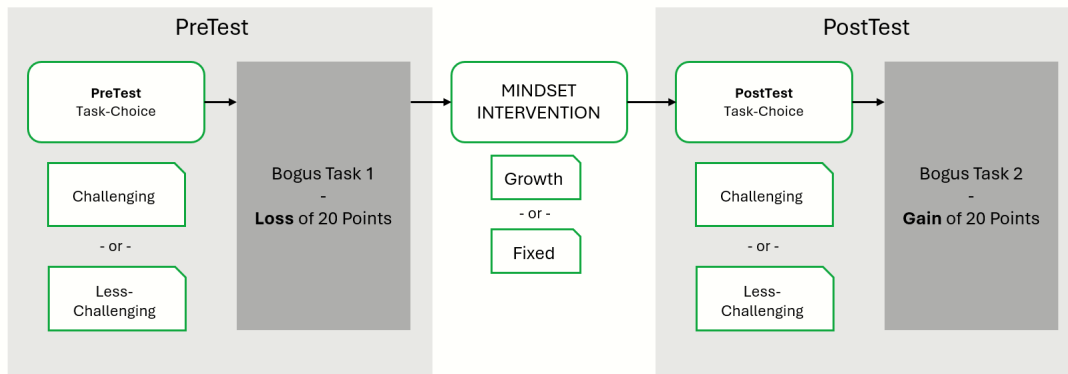


Figure 3.4: Task-Choice Flowchart

This simulates a scenario within the experiment where, just before the mindset intervention, the participants made a decision and failed. After the mindset intervention, the participants were asked to make the same choice between a challenging or a less-challenging task. The participant had faced the same choice before the intervention, and they had failed and lost valuable Points. The stakes of the decision were extremely clear to the participants before they made their second Task Choice after the intervention.

### 3.6.3. Work-Compensation Preference

The participants were given a total of 120 Points at the start of the game. Within the game, these 120 Points represented the total compensation the employee was awarded for their "work" at the new job. The participants were also explained the 6 Work-Compensation options that together make up the Work-Compensation plan. The participants understood that they could gain and lose points by doing (bogus) tasks.

The participants distributed 120 Points among the 6 Work-Compensation options. More Points were assigned to the compensation option that participants considered more important. This distribution represented the Work-Compensation Preference of the participants.

The 6 Work-Compensation options and their description were:

1. **Salary:** monthly, fixed payments made to employees for their work.
2. **Work-Life Balance:** flexibility in working from home in a week.
3. **Skill Development & Training:** programs to help employees enhance their skills and competencies.
4. **Paid time-off:** vacation days and personal leaves.
5. **Company-Stock:** the option to purchase company stock at a reduced price.
6. **Health & Wellness Benefits:** medical insurance and access to gyms/fitness programs.

Assign Points by moving the sliders. Or input the numeric values in the boxes on the right. Remember, you have a total of 120 Points.

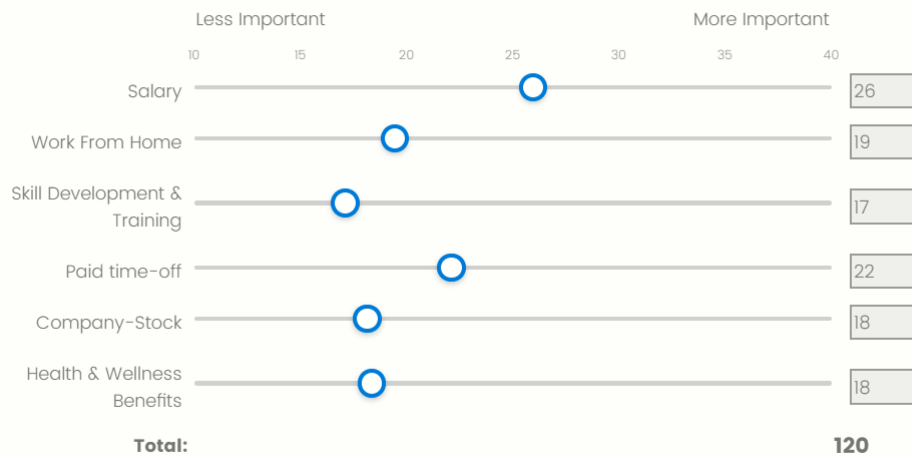


Figure 3.5: Work-Compensation Preference with example values

The participants started the game by distributing 120 Points amongst the 6 work-compensation options. This initial distribution of Points makes up the *Original* Work-Compensation Preference of the participants. After the 20 Point reduction, the participants defined their *PreTest* Work-Compensation Preference by dividing a total of 100 Points amongst the options. Similarly, after the 20 Point increase, the participants define their *PostTest* Work-Compensation Preference by dividing a total of 120 Points.

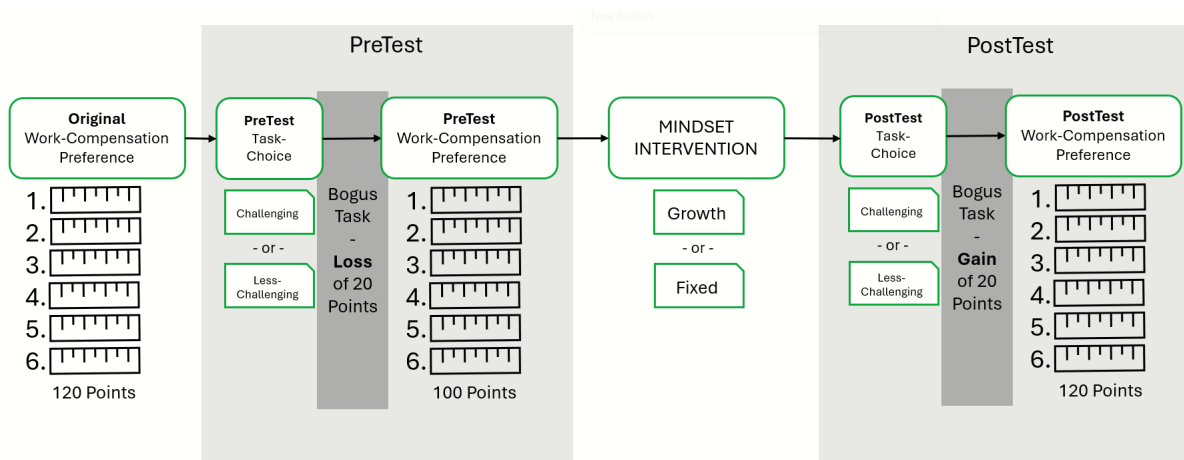


Figure 3.6: Work-Compensation Preference Flowchart

Thus, the participants’ work compensation preference after a setback (PreTest) and their work compensation preference after a success (PostTest) were also recorded along with their initial (Original) work compensation preference at the start of the game.

### 3.6.4. Satisfaction

The participants’ satisfaction levels were recorded on four items on a five-point Likert scale (from 1: “Extremely dissatisfied” to 5: “Extremely satisfied”) as shown in Appendix A. The factor analysis showed that Satisfaction items loaded consistently on one factor. Running uni-dimensional reliability analysis showed that the four items of Satisfaction had high reliability (Cronbach’s  $\alpha = 0.840$ ).

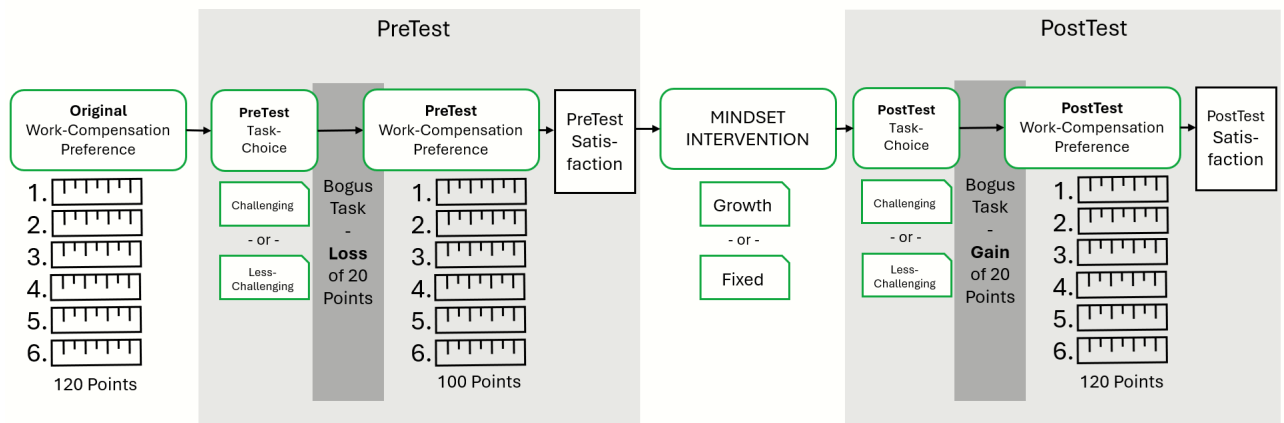
	RC1	Uniqueness
PostTest_Satis_q1	0.851	0.276
PostTest_Satis_q2	0.876	0.233
PostTest_Satis_q3	0.823	0.323
PostTest_Satis_q4	0.737	0.457

**Table 3.8:** Component Loadings for Satisfaction Items

Estimate	Cronbach's $\alpha$
Point estimate	0.840
95% CI lower bound	0.767
95% CI upper bound	0.893

**Table 3.9:** Frequentist Scale Reliability Statistics - Satisfaction

Within the flow of the game, the Satisfaction was recorded after the participants had allocated their Points to the PreTest and PostTest Work-Compensation Preferences. This was done to measure their valuation of work compensation before and after the adoption of a growth/fixed mindset.



**Figure 3.7:** Satisfaction Flowchart

# 4

## Results

### 4.1. Manipulation Check

The manipulation check was done at the end of the experiment (post-game data collection) to test the participants' attention and the extent of their interaction with the mindset intervention. The participants were asked two questions to recall the key message of the seminar (mindset intervention) in the game. The two items used for the manipulation check are included in Appendix A. If participants were able to answer at least one of the two items correctly, their data was included in the analysis. However, failure to recall the correct message in both items resulted in the removal of their data from the analysis.

In the case of the growth mindset intervention, none of the participants got both items wrong. Still, there were three cases where the participants got one of the two items wrong. On the other hand, in the case of fixed mindset intervention, there were five cases where the participants got both items incorrect. There were four cases where the participants got one of the two items wrong in the fixed mindset condition.

It was crucial for the experiment that the participant creates a new cognition due to the mindset intervention. Usually, it is not recommended to remove the data that failed the manipulation check as it reduces the randomness in the data and might make the final sample biased. However, if the participants failed to recall the message correctly in both items suggests that either they created a different cognition than intent by the experiment or the participants failed to pay proper attention. Either way, it made more sense to remove the data of the five participants who failed both manipulation checks.

### 4.2. Task Choice:

A Logistic Regression was carried out in JASP to study the effects of Mindset (growth or fixed) on the likelihood of participants choosing the Less-Challenging Task (coded as class 1) after the Mindset intervention. The participants' PostTest Task Choice (between Challenging Task or Less challenging Task) was the dependent variable. The Mindset condition was the independent categorical variable. The participants' BIS and BAS scores were included as the independent continuous variables in the analysis. The logistic regression model was statistically significant,  $\chi^2(65) = 20.674, p < .001$ .

Model	Deviance	AIC	BIC	df	$\chi^2$	p	Mcfadden R <sup>2</sup>	Nagelkerke R <sup>2</sup>
H <sub>0</sub>	95.524	97.524	99.758	68				
H <sub>1</sub>	74.850	82.850	91.787	65	20.674	< .001	0.216	0.345

Table 4.1: Model Summary - PostTest Task Choice

	Estimate	Standard Error	Odds Ratio	z	Wald Test		
					Wald Statistic	df	p
(Intercept)	1.554	1.752	4.732	0.887	0.787	1	0.375
Mindset (GM)	-2.474	0.607	0.084	-4.072	16.585	1	< .001
BIS	0.557	0.504	1.746	1.107	1.224	1	0.269
BAS	-0.574	0.755	0.563	-0.761	0.578	1	0.447

Table 4.2: Coefficients

Observed	Predicted		% Correct
	Challenging	Less-Challenging	
Challenging	25	8	75.758
Less-Challenging	10	26	72.222
Overall % Correct			73.913

Table 4.3: Confusion matrix

The current model's value of McFadden's  $R^2 = 0.216$  indicates a good model fit. The model correctly classified 73.9% of cases. McFadden's  $R^2$  values between 0.2 and 0.4 are considered to indicate a good fit for logistic regression models (Hosmer Jr et al., 2013).

The logistic regression analysis revealed a significant effect ( $p < 0.001$ ) of Mindset (GM) on the likelihood of choosing the PostTest task as 'Less-Challenging'. The odds ratio of 0.084 suggests that Mindset (GM) substantially decrease the odds of choosing the 'Less-Challenging' PostTest task.

The BIS score is not statistically significant ( $p = 0.269$ ), indicating that it does not have a significant effect on the PostTest Task Choice. The BAS score is also not statistically significant ( $p = 0.447$ ), suggesting it does not significantly affect the PostTest Task Choice.

Figure 4.1 visualises the probability of participants choosing the Less-Challenging Task between the Fixed Mindset and the Growth Mindset intervention. The y-axis represents the probability of choosing the Less-Challenging Task as the PostTest Task Choice. We can see the participants in the Growth Mindset intervention were less likely to choose the Less-Challenging Task.

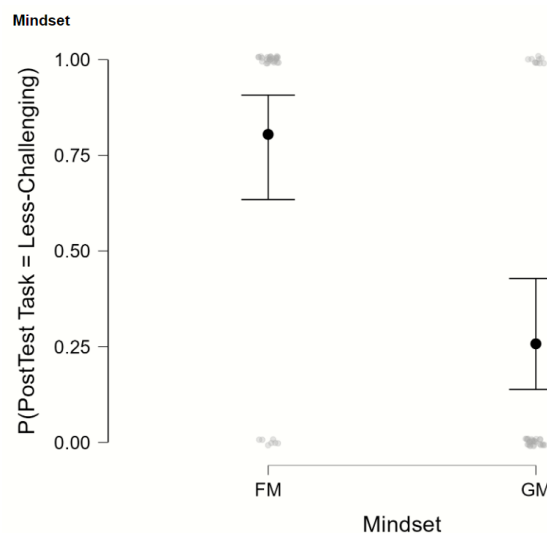


Figure 4.1: Task Choice Estimate

The direct effects of BIS/BAS characteristics on Task Choice were not significantly observed. While both BIS and BAS traits did not influence Task Choice significantly, BIS traits (associated with the avoidance of punishment) had a more pronounced effect compared to BAS traits. Individuals with high BIS scores were more likely to select the Less-Challenging Task, highlighting the importance of clear punishments in motivating Gen Z employees to embrace challenges. However, insignificant statistical results from the experiment in this research suggest that further research is required to confirm the BIS/BAS influence on Task Choice.

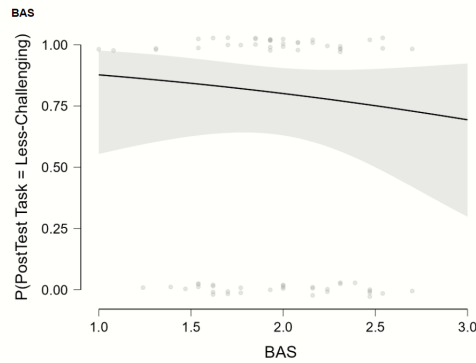


Figure 4.2: Task Choice Estimate Plot based on BAS

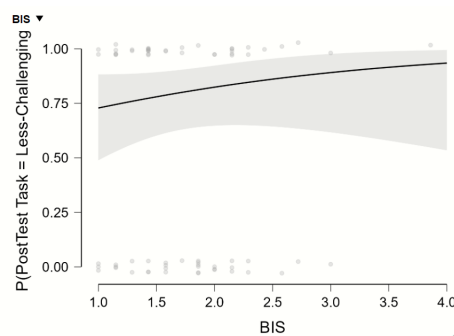


Figure 4.3: Task Choice Estimate Plot based on BIS

### 4.3. Work Compensation

A Repeated Measures ANOVA was conducted to compare the effects of Mindset on Points allocated to Skill Development in the work-compensation plan. The Points were assigned by participants on three separate occasions. The participants' BIS and BAS scores were included as covariates in the analysis. The interaction between Mindset and BIS and BAS characteristics was also included in the analysis.

Mauchly's test of sphericity indicates that the assumption of sphericity is violated ( $p=0.045$ ). The Greenhouse-Geisser correction is applied.

There were significant changes in Skill-Points over time (Original, PreTest, PostTest) indicating changes in skill points across the different time points,  $F(1.826,115.068)=3.407$ ,  $p=0.041$ .

Post Hoc Test using Holm correction revealed that the three measurements of Skill-Points were significantly different from one another. In the comparison of Original and PreTest Points a significant reduction was expected as there was a 20-point reduction before the PreTest point-allocation in the experiment. In the comparison of PreTest and PostTest Points a significant increase was expected as there was a 20-point increase before the PostTest point-allocation in the experiment. However, the significant difference in the means of Original and PostTest ( $p=0.042$ ) suggests that the participants changed their original work-compensation plans significantly in the Skill Development option. This

indicates participants' willingness to negotiate on Skill Development as a viable work compensation option.

Cases	Sphericity Correction	Sum of Squares	df	Mean Square	F	p
Skill-Points	None	82.316	2.000	41.158	3.407	0.036
	Greenhouse-Geisser	82.316	1.826	45.068	3.407	0.041
Skill-Points * Mindset	None	2.933	2.000	1.466	0.121	0.886
	Greenhouse-Geisser	2.933	1.826	1.606	0.121	0.868
Skill-Points * BIS	None	22.885	2.000	11.442	0.947	0.391
	Greenhouse-Geisser	22.885	1.826	12.530	0.947	0.384
Skill-Points * BAS	None	21.711	2.000	10.856	0.899	0.410
	Greenhouse-Geisser	21.711	1.826	11.887	0.899	0.402
Skill-Points * Mindset * BIS	None	0.489	2.000	0.244	0.020	0.980
	Greenhouse-Geisser	0.489	1.826	0.268	0.020	0.973
Skill-Points * Mindset * BAS	None	6.407	2.000	3.204	0.265	0.767
	Greenhouse-Geisser	6.407	1.826	3.508	0.265	0.747
Residuals	None	1522.029	126.000	12.080		
	Greenhouse-Geisser	1522.029	115.068	13.227		

**Table 4.4:** Within Subjects Effects - Skill-Points

		Mean Difference	SE	t	<i>p</i> <sub>holm</sub>
Original	PreTest	2.737	0.604	4.529	< .001
	PostTest	-1.243	0.604	-2.057	0.042
PreTest	PostTest	-3.980	0.604	-6.587	< .001

**Table 4.5:** Post Hoc Comparisons - Skill-Points

Between-subjects effects showed no significant main effects of mindset on Points allocated to Skill Development at the  $p < .05$  level for the two Mindset conditions,  $F(1, 63) = 0.050$ ,  $p = 0.823$ . There was no significant effect of Mindset\*BIS interaction on Skill-Points,  $p = 0.310$ . There was no significant effect of Mindset\*BAS interaction on Skill-Points,  $p = 0.256$ .

However, it should be noted that both the interaction effects presented lower  $p$  values than Mindset alone. Taken together, these results suggest that current Mindset intervention alone is not enough to encourage Gen Z individuals to prioritize Skill Development in their work-compensation plans. The participants' BIS/BAS characteristics do not moderate the change in the Skill-Points, however these results require further research to confirm their trends.

Cases	Sum of Squares	df	Mean Square	F	p
Mindset	4.544	1	4.544	0.050	0.823
BIS	3.878	1	3.878	0.043	0.837
BAS	0.138	1	0.138	0.002	0.969
Mindset * BIS	94.691	1	94.691	1.047	0.310
Mindset * BAS	118.690	1	118.690	1.312	0.256
Residuals	5699.573	63	90.469		

**Table 4.6:** Between Subjects Effects - Skill-Points

## 4.4. Satisfaction

A Repeated Measures ANOVA was conducted to compare the effects of mindset intervention on Satisfaction levels. The participants' BIS and BAS scores were included as covariates in the analysis. The interaction between Mindset, BIS and BAS was also included in the analysis.



There was no significant difference in Satisfaction at the  $p < .05$  level for the two Mindset conditions,  $F(1, 63) = 0.058$ ,  $p = 0.811$ . Additionally, there were no significant interactions between mindset and BIS ( $p = .278$ ) or between mindset and BAS ( $p = 0.807$ ).

Cases	Sum of Squares	df	Mean Square	F	p	$\eta^2_p$
Mindset	0.038	1	0.038	0.058	0.811	< 0.001
BIS	0.861	1	0.861	1.310	0.257	0.020
BAS	1.334	1	1.334	2.031	0.159	0.031
Mindset * BIS	0.785	1	0.785	1.196	0.278	0.019
Mindset * BAS	0.040	1	0.040	0.060	0.807	< 0.001
Residuals	41.379	63	0.657			

**Table 4.7:** Between Subjects Effects - Satisfaction

Mauchly's test of sphericity was not required as the Satisfaction was measured only two times. A Levene's test of equality of variances revealed that the variances in the two Satisfaction levels were equal. There was not a significant difference in the PreTest and PostTest Satisfaction (within-subject effects) at the  $p < .05$  level,  $F(1, 63) = 0.261$ ,  $p = 0.611$ .

However, the three-way interaction between satisfaction, mindset, and BIS approaches statistical significance,  $F(1, 63) = 3.837$ ,  $p = .055$ . Although the p-value is slightly above the conventional threshold of 0.05, the effect size indicates that this interaction accounts for approximately 5.7% (highest) of the variance in the Satisfaction levels. The three-way interaction suggests that the change in satisfaction levels may differ depending on both the type of mindset (fixed or growth) and the level of BIS.

Cases	Sum of Squares	df	Mean Square	F	p	$\eta^2_p$
Satisfaction	0.101	1	0.101	0.261	0.611	0.004
Satisfaction * Mindset	0.507	1	0.507	1.313	0.256	0.020
Satisfaction * BIS	0.852	1	0.852	2.209	0.142	0.034
Satisfaction * BAS	0.387	1	0.387	1.003	0.320	0.016
Satisfaction * Mindset * BIS	1.481	1	1.481	3.837	0.055	0.057
Satisfaction * Mindset * BAS	0.016	1	0.016	0.040	0.842	< 0.001
Residuals	24.309	63	0.386			

**Table 4.8:** Within Subjects Effects - Satisfaction

The interaction suggests a moderating effect where the presence of both mindset and BIS levels modifies the change in satisfaction. This means that neither BIS nor mindset alone can fully explain the variations in satisfaction; instead, their combined presence uniquely influences satisfaction. While the interaction is only approaching significance, further research might be needed to confirm the interaction.

To gain insight into the moderation effect, the participants' PreTest Satisfaction scores were subtracted from their PostTest Satisfaction scores. The values were stored as "*Delta Satis*". The descriptive table and plot (see Figure 4.4) illustrated the interaction between BIS and *Delta Satis* for different Mindset groups. A positive value of *Delta Satis* represents an increase in satisfaction from the PreTest to the PostTest. Whereas, a negative value of *Delta Satis* represents a decrease in satisfaction after the mindset intervention.

For individuals with a growth mindset (GM), there is a positive relationship between BIS and *Delta Satis*, indicated by the upward slope of the blue regression line. As BIS increases, *Delta Satis* tends to increase for individuals with a growth mindset. For individuals with a fixed mindset (FM), the relationship between BIS and *Delta Satis* appears flat or slightly negative, as shown by the red regression line. An increase in BIS causes a small decrease in *Delta Satis* for individuals with a fixed mindset.

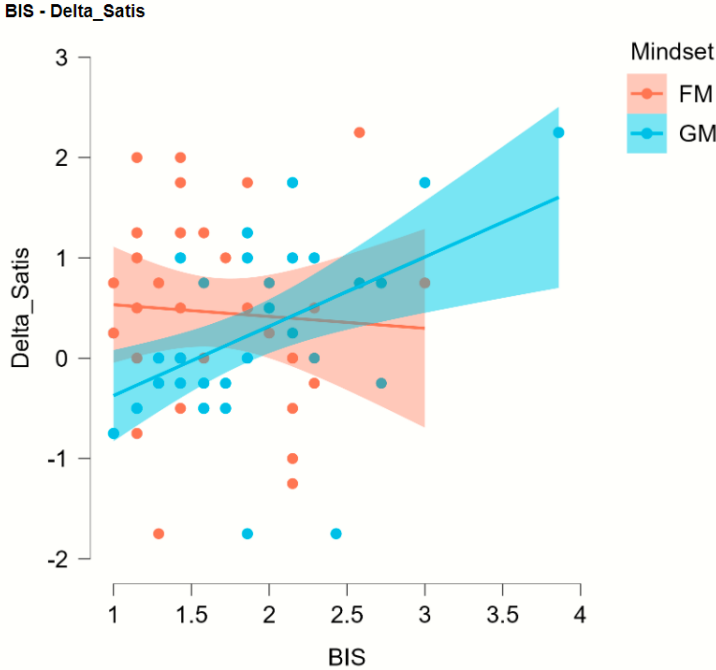


Figure 4.4: Change in Satisfaction due to Mindset\*BIS

Mindset	N	Mean	SD	SE	Coefficient of variation
FM	33	0.455	0.955	0.166	2.101
GM	36	0.222	0.874	0.146	3.932

Table 4.9: Descriptives - Delta Satis

# 5

## Discussion

### 5.1. Experiment Design

Gen Z individuals born and raised in the digital age, have unprecedented access to the internet and information, fundamentally shaping their worldview, behaviours, and interactions (Reid Chassiakos et al., 2016). The day-to-day lives of Gen Z individuals are closely intertwined with the digital landscape. This makes the Gen Z cohort the perfect population to conduct online research. Conclusions drawn from online research are often criticised for their lack of generalizability to the wider population in the non-digital space (Cozby et al., 2012). However, when it comes to Gen Z, who are digital natives, conducting online research provides access to a wider range of participants as well as improves the generalizability of the findings because the Gen Z cohort is defined by its close relation with digital technology and media.

The design of the experiment in this research took inspiration from role-playing games (RPGs). The key advantage of RPG becomes apparent when a set of scenarios are chained together one after the other and the player is informed that their actions have consequences. As a result, a player's response to the current scenario will influence the type and quality of the successive scenarios. This cause-and-effect mechanism ensures that the player's actions have significant consequences, which deepens engagement, as players feel their choices truly matter and have stakes (Tekinbas and Zimmerman, 2003).

Ultimately, achieving the objective of the game becomes a balance between solving the current scenario to the best of the abilities without compromising the objective in the successive scenarios. The participant had to consider their short-term goals as well as their long-term goals within the experiment. The creation of stake was extremely important in this research because this forces the participants to actively interact with the experiment (Williams et al., 2018). Thus, the experiment was able to create an environment which was able to capture the stakes similar to a real-world workplace.

Finally, by controlling where the participants lost and gained Points, the experiment was able to put the participants in positions of setback and success. Thus, along with stakes, the experiment was able to simulate positions of setback and success in the workplace. Participants were unaware of this and hence naturally they attributed the loss/gain of points to their skills and abilities. Thus, the participants' decisions regarding Task Choice, Work Compensation Preference and Satisfaction provide data on their personalities and attitudes in the workplace (Bowman and Lieberoth, 2018).

### 5.2. Task Choice

The findings of this study indicate that mindset significantly influences Gen Z employees' task choices in the workplace. Participants exposed to the growth mindset intervention demonstrated a higher tendency to choose the Challenging Task compared to those with a fixed mindset. This supports the Task Choice Main Hypothesis that Gen Z employees are more likely to engage in challenging tasks following a growth mindset intervention. Participants who were exposed to a growth mindset intervention were more inclined to choose challenging tasks, even after experiencing failure, supporting the idea that a growth mindset fosters resilience and a positive attitude towards setbacks.

Both task choices (challenging and less-challenging) awarded the same amount of points to the participants after successful completion. Insight from experiments on Prospect Theory, states that even under economic equivalence it appears that "losses loom larger than gains" (Kahneman and

Tversky, 1984). The fact that participants in the growth mindset condition were more likely to engage in challenging tasks even after losing points in the PreTest environment further supports the idea that mindset interventions can be effective in promoting a more adaptive approach to learning and development in the workplace. This aligns well with Carol Dweck's Mindset Theory, which argues that individuals with a growth mindset see challenges as valuable opportunities for learning and personal growth. In contrast, those with a fixed mindset might avoid difficult tasks, particularly in the face of failure.

Regarding BIS/BAS main effects, the BIS trait had a stronger influence than BAS on the task choice. This is consistent with the study in risk-taking which suggests that risk-taking is governed more by concern for a loss (measured by BIS) than the desire for a win (measured by BAS) (Demaree et al., 2008). It is noteworthy that as the BIS sensitivity of a participant increased, so did their likelihood of selecting a less challenging task in the post-test condition. Whereas, as the BAS sensitivity of a participant increased, the likelihood of selecting a less challenging task in the post-test condition decreased. This trend could be due to the fact that BAS-sensitive individuals believe they have higher control of the outcomes than BIS-sensitive individuals. This is consistent with the findings of Windsor et al. (2008) which posit that BAS sensitivity is positively associated with perceived control in a setback, and BIS sensitivity is negatively associated with control.

### 5.3. Work Compensation Preference

The majority of participants in this research had more than one year of work experience. Participants with more work experience have better clarity on their preferences for work compensation than compared to participants with little to no work experience (WorldatWork, 2024). This trend underscores that those with hands-on work experience have a clearer understanding of what compensation means in practical terms, as they have lived through the implications of different pay structures (Nghia et al., 2022). The changes in the Points allocated to Skill Development across various points in the research suggest that participants are open to negotiating Skill Development as a viable work compensation option. However, the Skill Points did not differ between the two mindset conditions.

The participants in growth and fixed mindset intervention had similar number of points allocated to Skill Development in the PostTest condition. These results on Skill Points when compared with the results of Task Choice bring to light the importance of a genuine growth mindset. As the participants' attitudes towards challenges changed significantly after the growth mindset intervention, these participants did not prioritise skill development and training when they were in a position of success in their workplace. This can be seen as a sign of a false growth mindset where the participants have only the superficial adoption of the growth mindset.

Decisions regarding counter-attitude behaviour influence the attitude of an individual depending on the compensation and justification provided after the counter-attitude behaviour (Harmon-Jones and Harmon-Jones, 2007). While compensation and external justification can motivate individuals to engage in behaviours aligned with a growth mindset, this might not lead to a genuine adoption of the mindset. Instead, it could result in a "false growth mindset," where the behaviour is driven by external rewards rather than an internalized belief in personal development and the value of challenges. In essence, relying too heavily on external compensation could lead to a scenario where employees appear to adopt a growth mindset, but in reality, they may only be motivated by tangible rewards rather than a true belief in the principles of growth and learning. This could ultimately be counterproductive, as it may not address the deeper issues of motivation and engagement within the Gen Z cohort (Ryan and Deci, 2000).

Interestingly, the interaction effects between the mindset and BIS/BAS traits showed more pronounced effects than the direct effects of mindset ( $p=0.823$ ), BIS ( $p=0.837$ ) or BAS ( $p=0.969$ ) alone. Whereas, the interaction effect between Mindset and BIS/BAS presented relatively lower  $p$  values. Mindset\*BIS has a  $p$  value of 0.310 and Mindset\*BAS has a  $p$  value of 0.256. This requires further research. Tailoring the mindset intervention to BIS/BAS characteristics would yield significant changes to point allocation towards skill development as the interaction effects showed some considerable potential. This has relevance in the workplace as organisations can develop methods to spread the ideas of a growth

mindset in the workplace that trigger the BIS/BAS characteristic as well. However, further research is required to confirm the interaction effects between the mindset and BIS/BAS traits.

## 5.4. Satisfaction

In general, mindset alone does not influence satisfaction from the work-compensation. However, the interaction effect between mindset and BIS traits showed some interesting results. The change in satisfaction from the PreTest to PostTest condition was more positive for individuals with a growth mindset and a higher affinity for BIS. However, a key point to remember is the fact that all participants were treated with a gain of 20 Points after mindset intervention.

BIS-driven individuals are motivated by avoiding punishments. When these individuals adopt a growth mindset, they report a higher level of satisfaction after a successful return on their practice of growth mindset. In other words, BIS-driven individuals are more satisfied with their success when they have a growth mindset. In future research, it will be very fascinating to look at changes in satisfaction levels of BIS-driven individuals when they face another setback after they practised the teachings of a growth mindset. One should remember that the growth mindset posits accepting challenges but the theory does not guarantee success from each challenging project undertaken.

## 5.5. Implications in the Workplace

For managing Gen Z employees effectively, it's crucial to focus on intrinsic motivators and to create a culture where a growth mindset is nurtured through a positive attitude towards challenges and focus on learning from failure, rather than relying solely on external compensation as the driving force (Douglas, 2020). Encouraging a culture that values learning from challenges and setbacks can help Gen Z employees take on more difficult tasks and remain engaged even after failures (Keating and Heslin, 2015). Building resilience through a growth mindset enables Gen Z employees to overcome issues of stress and anxiety in the workplace as well and improves their overall performance (Schroth, 2019).

Individuals with high BIS sensitivity tend to be more cautious and may avoid risks due to the potential for negative outcomes. Managers should provide clear guidelines, support, and assurance when assigning challenging tasks to BIS-sensitive employees. These employees might benefit from gradual exposure to challenges, where the perceived risk is minimized, and the focus is on learning and self-improvement (Dweck, 2006). On the other hand, individuals with high BAS sensitivity are more driven by rewards and are likely to take on challenges if they see a potential for positive outcomes. The focus of growth mindset training for these employees should be on the potential rewards of learning from challenges and the long-term benefits of persistence and resilience (Dweck, 2006).

Gen Z's work compensation preferences evolve with experience, showing a potential openness to non-traditional forms of compensation, such as skill development opportunities (Schroth, 2019). However, the effectiveness of growth mindset interventions on work compensation preferences is not straightforward. Organizations should offer flexible compensation packages that include options for skill development, especially for more experienced employees. However, care must be taken to ensure that compensation structures do not inadvertently foster a "false growth mindset," where employees engage in a growth-oriented attitude solely for external rewards rather than genuine personal development (Dweck and Yeager, 2019).

Managers should consider personalized approaches to mindset training and task assignments based on employees' individual BIS/BAS profiles. Further research on tailored mindset training could lead to more effective programs that nudge Gen Z to opt for training programs in their work compensation plans (Thaler, 2018). The interaction effects between mindset and BIS/BAS traits in this research suggest that tailored mindset training could particularly impact Gen Z's preference for skill development and training as a work compensation medium.

Industries that require strong leadership characteristics can benefit a lot from the implementation of a growth mindset culture. New and young employees in these industries who have the potential to grow into leadership roles but are at risk of succumbing to stress and workplace pressure should be trained with the concepts of the growth mindset. Once introduced to the ideas of a growth mindset, Gen Z employees with lower risk aversion can be placed in leadership roles that require innovation and

problem-solving under pressure (Judge and Bono, 2000). Whereas, Gen Z employees more risk-averse can focus on leadership roles requiring high precision and adherence to protocols.

Finally, managers should embody the ideas of a growth mindset in the workplace to set an example for the Gen Z workforce (Heslin et al., 2006). Managers with a growth mindset are more likely to engage in coaching behaviours. These managers tend to see the potential for growth in their employees and are therefore more invested in their development which improves employee engagement and performance. In contrast, managers with a fixed mindset are less inclined to coach, as they may view coaching efforts as less likely to yield improvement. Coaching has been found to provide emotional support and reduce the stress of employees. It helps in goal attainment as well as increased psychological and workplace well-being (Theeboom et al., 2014).

## 5.6. Limitations

Despite these significant findings, several limitations must be acknowledged. The sample size was relatively small which may limit the generalizability of the results (Bougie and Sekaran, 2019). This is a prominent issue with this research. However, considering the limited time and resources, the best use of the collected data was made.

Additionally, the experimental design, while robust, may not fully capture the complexities of a real workplace environment. The interactive game used to simulate workplace scenarios may lack the nuance and unpredictability of actual job settings. A lot of other factors in the workplace such as culture, expected co-worker support, autonomy, pride in work, and salary threshold; affect the attitude towards setbacks and orientation towards challenges (Rattan and Ozgumus, 2019).

The accuracy of the mindset intervention to impart the correct ideas of the mindset theory to the participants is also up for debate. The comprehension passage used in the experiment is based on concepts used in previous mindset research. However, the exact comprehension passage has not been utilised in any research related to mindset or Gen Z. A manipulation check was included in the study to gauge the understanding the participants had developed after undergoing the mindset intervention. The result from the manipulation check showed that the majority of the participants understood the key message. However, the fixed mindset intervention was less effective than the growth mindset intervention.

Finally, the BIS/BAS scales did not work as expected. The BAS scores did not load consistently into one (or three) factors as suggested by the theory. Due to this fact, the interaction effect results become difficult to interpret.

## 5.7. Future Research

Future research should explore the long-term effects of mindset interventions on Gen Z employees' workplace behaviour and satisfaction. It would be beneficial to conduct longitudinal studies (over months) to assess the practice of a growth mindset over time. As well as conducting research to test whether continuous mindset training is necessary to sustain a genuine growth mindset (Dweck and Yeager, 2019).

Additionally, examining the impact of growth mindset interventions across different cultures could provide deeper insights into the findings of this research (Huang et al., 2022; Burnette et al., 2023). Further investigation into the interaction between BIS/BAS traits and other motivational factors, such as organizational culture and leadership styles, could also enhance our understanding of how to effectively foster a growth mindset in Gen Z individuals (Dweck, 2006).

A significant portion of this research originally focused on persuasive negotiations and negotiation support systems (Kersten and Lai, 2007; Sycara, 1990). This aspect of the research was removed to sharpen the scope of the research. However, certain elements of negotiation were still incorporated into the game. The PreTest and PostTest work compensation point allocations were designed as scenarios where a *Boss* character in the game, tries to negotiate with the participants. The negotiation in the current game did not offer any form of resistance nor did they use any specific negotiation strategy.

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Hence, the effect of negotiation in the current experiment is negligible. However, considering the influence of negotiation strategies and the growth mindset theory, employees could be nudged into prioritising skill development in their work compensation plans with the effective use of negotiation strategies (Ramchurn et al., 2007). How can negotiation strategies be used to further enhance the growth mindset and prevent the pitfalls of a false growth mindset can be studied in subsequent research (Movius, 2008; Ramchurn et al., 2003).

# 6

## Conclusion

The Gen Z cohort faces higher rates of mental health issues, including depression and anxiety, which can impact their motivation and potential for leadership in the workplace. When combined with their lack of communication skills in the workplace, these issues can create significant challenges for their overall well-being and may lead them to adopt a fixed mindset. This research concludes that promoting a growth mindset among Gen Z employees can positively impact their orientation towards challenging tasks and attitude towards setbacks in the workplace.

When employees experience a substantial amount of cognitive dissonance, especially in unfamiliar situations, their initial reaction might be to disengage (Cancino Montecinos, 2020). For example, if someone is suddenly confronted with information that contradicts their long-held beliefs, they might avoid thinking about it or distract themselves with other activities to reduce the discomfort. However, there are times when people don't just walk away. If they have enough motivation and cognitive capacity, they choose to confront the dissonance directly. For instance, someone might enrol in a training program designed to promote a growth mindset, even if it challenges their current way of thinking. This external stimulus, like the promise of a reward or the fear of missing out on an opportunity, can encourage them to engage in behaviours that are at odds with their original beliefs even if there is a substantial amount of cognitive dissonance. It remains to be seen if the process of reducing cognitive dissonance when aligned with the BIS/BAS triggers of reward and punishment leads to easier adoption of a genuine growth mindset in the long run.

For Gen Z employees, who are digital natives, adopting a growth mindset can enhance their engagement with challenging tasks. However, the onus is not just on the employee to perform at their best. An employee is full of potential, and the duty to bring out their best work is shared between the individual and the organisation. Organizations should tailor their growth mindset interventions in the workplace to account for BIS/BAS traits to maximize their effectiveness. This involves creating an environment where both potential rewards (for BAS-driven individuals) and avoiding punishments (for BIS-driven individuals) are emphasized to increase growth mindset adoption.

The online experiment in this research utilized a PreTest-PostTest design with an interactive game to simulate a workplace environment. The role-playing game was designed to capture the attitudes and preferences of Gen Z individuals. The mindset intervention was based on reading and then writing a summary of a comprehension passage. The participants were not told the explicit objectives of the experiment till the end of the experiment. Statistical tests were used to test hypotheses on Task Choice, work compensation preference and Satisfaction.

### **Task Choice Hypothesis:**

The results indicate that Gen Z employees are more inclined to choose challenging tasks after adopting a growth mindset. This aligns with Carol Dweck's Mindset Theory, which suggests that individuals with a growth mindset perceive challenges as opportunities for growth and learning. Despite this, the direct effects of BIS/BAS characteristics on Task Choice were not significantly observed.

### **Work Compensation Hypothesis:**

Regarding work compensation preferences, the study found that participants were open to negotiating skill development as part of their compensation. However, the mindset intervention alone did not significantly alter the points allocated to skill development between the growth and fixed mindset



groups. The interaction between mindset and BIS/BAS traits suggested potential but was not statistically significant. This indicates that while a growth mindset may influence attitudes towards challenging tasks, it does not necessarily translate into a preference for skill development as a compensation medium without considering personality traits.

**Satisfaction Hypothesis:**

The Satisfaction levels of Gen Z employees were expected to increase after adopting a growth mindset. However, the results showed no significant difference in Satisfaction levels between the growth and fixed mindset conditions. The interaction between mindset and BIS/BAS traits approached significance, suggesting a complex interplay that warrants further investigation. This research saw the BIS trait (with mindset) had a more significant effect on PostTest Satisfaction levels than the BAS trait.

#	Hypothesis	Result
1	Increase in subjects choosing challenging tasks after adopting a growth mindset in the workplace	Supported
2	Change in subjects choosing challenging tasks is influenced by BIS characteristics	Not Supported
3	Change in subjects choosing challenging tasks is influenced by BAS characteristics	Not Supported
4	Importance of Skill Development & Training as a work compensation medium increased after adopting a growth mindset	Not Supported
5	Increase in the importance of Skill Development & Training as a work compensation medium is moderated by BIS characteristics	Inconclusive
6	Increase in the importance of Skill Development & Training as a work compensation medium is moderated by BAS characteristics	Inconclusive
7	Higher Satisfaction levels from work-compensation plans after adopting a growth mindset in the workplace	Not Supported
8	Change in Satisfaction levels are moderated by BIS characteristics after adopting a growth mindset	Supported
9	Change in Satisfaction levels are moderated by BAS characteristics after adopting a growth mindset	Not Supported

**Table 6.1:** Hypothesis Results

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# A

## Appendix - A

### **A.1. BIS/BAS Items**

1. A person's family is the most important thing in life.
2. Even if something bad is about to happen to me, I rarely experience fear or nervousness.
3. I go out of my way to get things I want.
4. When I'm doing well at something I love to keep at it.
5. I'm always willing to try something new if I think it will be fun.
6. How I dress is important to me.
7. When I get something, I want, I feel excited and energized.
8. Criticism or scolding hurts me quite a bit.
9. When I want something, I usually go all-out to get it.
10. I will often do things for no other reason than that they might be fun.
11. It's hard for me to find the time to do things such as get a haircut.
12. If I see a chance to get something I want I move on it right away.
13. I feel pretty worried or upset when I think or know somebody is angry at me.
14. When I see an opportunity for something I like I get excited right away.
15. I often act on the spur of the moment.
16. If I think something unpleasant is going to happen, I usually get pretty "worked up."
17. I often wonder why people act the way they do.
18. When good things happen to me, it affects me strongly.
19. I feel worried when I think I have done poorly at something important.
20. I crave excitement and new sensations.
21. When I go after something I use a "no holds barred" approach.
22. I have very few fears compared to my friends.
23. It would excite me to win a contest.
24. I worry about making mistakes.

### **A.2. Bogus Tasks**

The bogus tasks were based on logical reasoning problems of the Graduate Record Examination Analytical Test. The participants had to choose the option that best matches the relationship shown in CAPITALS. The correct choices are highlighted in the respective figures.

CHRONOLOGICAL : TIME

virtual : truth

abnormal : value

marginal : knowledge

ordinal : place

coincidental : health

MASSIVE : BULK

ultimate : magnitude

trivial : importance

anonymous : luster

interminable : legacy

gigantic : size

Figure A.1: Bogus Task 1

TOPAZ : YELLOW

diamond : carat

jeweller : clarity

sapphire : red

amethyst : purple

amber : blue

LUMEN : BRIGHTNESS

candle : light

density : darkness

nickel : metal

inches : length

color : hue

Figure A.2: Bogus Task 2

## A.3. Mindset Intervention Comprehension Passage

### A.3.1. Growth Mindset:

"Research says you can always greatly change how intelligent you are. Intelligence is not fixed but evolves through effort and learning, based on scientific research. Taking on challenging tasks is key because it promotes learning and forms new neural connections, enhancing brain function.

The harder you work at something, the better you will be. This principle applies to all areas, from academics to hobbies. Consistent practice leads to improvement. By working outside our comfort zones, we can work steadily while embracing setbacks.

Moreover, hard work builds resilience and grit is scientifically supported. Facing challenges develops mental toughness and the ability to persevere, preparing you for future obstacles. In our fast-changing world, continuous learning and adaptability are crucial. Embracing hard work and constant improvement

unlocks your full potential and leads to greater satisfaction. We can enhance your intelligence through effort and learning.

Accepting these truths can revolutionize our personal and professional lives. By acknowledging the malleable nature of our intelligence, learning opportunities from challenging work, and the benefits of hard work in suitable subjects, we can make informed decisions about where to invest our time and effort.”

### A.3.2. Fixed Mindset

“Research says each of us possesses a certain level of intelligence that is largely fixed. While education and experience can shape our abilities, our core intelligence does not change much over time. Instead of striving to surpass our cognitive limits, we should work within our capabilities for more satisfying outcomes.

Many people find challenging work frustrating due to frequent mistakes. This aversion is natural and not a sign of laziness. Acknowledging it allows us to focus on tasks that are less frustrating but equally important. By identifying our comfort zones, we can work steadily without constant setbacks.

The belief that hard work can compensate for a lack of talent is scientifically misleading. If we are not naturally inclined toward a task, hard work will not make us proficient, rather it leads to stress. Recognizing our natural talents allows us to focus our efforts where they yield better results and greater satisfaction, avoiding frustration and wasted energy.

Accepting these truths can revolutionize our personal and professional lives. By acknowledging the fixed nature of our intelligence, our natural aversion to challenging work, and the limits of hard work in unsuitable subjects, we can make informed decisions about where to invest our time and effort.”

## A.4. Satisfaction Items

1. How satisfied are you with the outcome of the negotiation?
2. How satisfied are you with the level of influence you had over the negotiation?
3. If you had to go through the negotiation process again, how likely are you to make the same choices?
4. To what extent do you feel that the final outcome met your personal goals?

## A.5. Manipulation Check

The two items used for verifying the mindset manipulation checks are presented here.

What was the general topic of the seminar you attended in the game?

Intelligence and skills are not fixed.

Intelligence and skills are largely fixed.

Recall the key message of the seminar you attended in the game?

The harder you work at something, the better you will be at it.

If you're not naturally good at a subject, working hard won't make you proficient at it.

Figure A.3: Two Manipulation Check Items



# B

## Appendix - B

### B.1. Full sample for the study: Unfiltered Data (N=74)

Gender	Frequency	Percent
Male	28	37.838
Female	44	59.459
Non-Binary	2	2.703
Missing	0	0.000
Total	74	100.000

**Table B.1:** Frequencies for Gender (N=74)

YoB	Frequency	Percent
1994	1	1.351
1996	5	6.757
1997	8	10.811
1998	11	14.865
1999	7	9.459
2000	13	17.568
2001	9	12.162
2002	8	10.811
2003	5	6.757
2004	3	4.054
2006	4	5.405
Missing	0	0.000
Total	74	100.000

**Table B.2:** Frequencies for Year of Birth (N=74)

Work_Exp	Frequency	Percent
0 to 1 Year	12	16.216
1 to 2 Years	16	21.622
2 to 4 Years	22	29.730
4+ Years	24	32.432
Missing	0	0.000
Total	74	100.000

**Table B.3:** Frequencies for Work Experience (N=74)

Nationality	Frequency	Percent
American	7	9.459
British	26	35.135
Canadian	18	24.324
Filipino	2	2.703
Hungarian	1	1.351
Israeli	1	1.351
Kenyan	1	1.351
Nigerian	4	5.405
South African	12	16.216
Ugandan	1	1.351
Australian	1	1.351
Missing	0	0.000
Total	74	100.000

Table B.4: Frequencies for Nationality (N=74)

## B.2. Sample Split between Mindset interventions: Unfiltered Data (N=74)

Mindset	Gender	Frequency	Percent	Valid Percent	Cumulative Percent
FM	Male	14	36.842	36.842	36.842
	Female	23	60.526	60.526	97.368
	Non-Binary	1	2.632	2.632	100.000
	Missing	0	0.000		
	Total	38	100.000		
GM	Male	14	38.889	38.889	38.889
	Female	21	58.333	58.333	97.222
	Non-Binary	1	2.778	2.778	100.000
	Missing	0	0.000		
	Total	36	100.000		

Table B.5: Frequencies for Gender (N=74) with Mindset Slip

Mindset	YoB	Frequency	Percent	Valid Percent	Cumulative Percent
FM	1996	3	7.895	7.895	7.895
	1997	4	10.526	10.526	18.421
	1998	8	21.053	21.053	39.474
	1999	3	7.895	7.895	47.368
	2000	5	13.158	13.158	60.526
	2001	6	15.789	15.789	76.316
	2002	4	10.526	10.526	86.842
	2003	2	5.263	5.263	92.105
	2004	1	2.632	2.632	94.737
	2006	2	5.263	5.263	100.000
	Missing	0	0.000		
Total		38	100.000		
GM	1994	1	2.778	2.778	2.778
	1996	2	5.556	5.556	8.333
	1997	4	11.111	11.111	19.444
	1998	3	8.333	8.333	27.778
	1999	4	11.111	11.111	38.889
	2000	8	22.222	22.222	61.111
	2001	3	8.333	8.333	69.444
	2002	4	11.111	11.111	80.556
	2003	3	8.333	8.333	88.889
	2004	2	5.556	5.556	94.444
	2006	2	5.556	5.556	100.000
Missing	0	0.000			
Total		36	100.000		

**Table B.6:** Frequencies for Year of Birth (N=74) with Mindset Slip

Mindset	Work_Exp	Frequency	Percent	Valid Percent	Cumulative Percent
FM	0 to 1 Year	7	18.421	18.421	18.421
	1 to 2 Years	8	21.053	21.053	39.474
	2 to 4 Years	10	26.316	26.316	65.789
	4+ Years	13	34.211	34.211	100.000
	Missing	0	0.000		
	Total		38	100.000	
GM	0 to 1 Year	5	13.889	13.889	13.889
	1 to 2 Years	8	22.222	22.222	36.111
	2 to 4 Years	12	33.333	33.333	69.444
	4+ Years	11	30.556	30.556	100.000
	Missing	0	0.000		
	Total		36	100.000	

**Table B.7:** Frequencies for Work Experience (N=74) with Mindset Slip

Mindset	Nationality	Frequency	Percent	Valid Percent	Cumulative Percent
FM	American	4	10.526	10.526	10.526
	British	13	34.211	34.211	44.737
	Canadian	8	21.053	21.053	65.789
	Filipino	1	2.632	2.632	68.421
	Hungarian	1	2.632	2.632	71.053
	Israeli	1	2.632	2.632	73.684
	Kenyan	1	2.632	2.632	76.316
	Nigerian	0	0.000	0.000	76.316
	South African	8	21.053	21.053	97.368
	Ugandan	1	2.632	2.632	100.000
	Australian	0	0.000	0.000	100.000
	Missing	0	0.000		
	Total	38	100.000		
GM	American	3	8.333	8.333	8.333
	British	13	36.111	36.111	44.444
	Canadian	10	27.778	27.778	72.222
	Filipino	1	2.778	2.778	75.000
	Hungarian	0	0.000	0.000	75.000
	Israeli	0	0.000	0.000	75.000
	Kenyan	0	0.000	0.000	75.000
	Nigerian	4	11.111	11.111	86.111
	South African	4	11.111	11.111	97.222
	Ugandan	0	0.000	0.000	97.222
	Australian	1	2.778	2.778	100.000
	Missing	0	0.000		
	Total	36	100.000		

Table B.8: Frequencies for Nationality (N=74) with Mindset Slip

### B.3. Sample Split between Mindset interventions: Filtered Data (N=69)

Mindset	Gender	Frequency	Percent	Valid Percent	Cumulative Percent
FM	Male	13	39.394	39.394	39.394
	Female	20	60.606	60.606	100.000
	Non-Binary	0	0.000	0.000	100.000
	Missing	0	0.000		
	Total	33	100.000		
GM	Male	14	38.889	38.889	38.889
	Female	21	58.333	58.333	97.222
	Non-Binary	1	2.778	2.778	100.000
	Missing	0	0.000		
	Total	36	100.000		

Table B.9: Frequencies for Gender (N=69) with Mindset Slip

Mindset	YoB	Frequency	Percent	Valid Percent	Cumulative Percent
FM	1996	2	6.061	6.061	6.061
	1997	4	12.121	12.121	18.182
	1998	6	18.182	18.182	36.364
	1999	2	6.061	6.061	42.424
	2000	5	15.152	15.152	57.576
	2001	5	15.152	15.152	72.727
	2002	4	12.121	12.121	84.848
	2003	2	6.061	6.061	90.909
	2004	1	3.030	3.030	93.939
	2006	2	6.061	6.061	100.000
	Missing	0	0.000		
Total		33	100.000		
GM	1994	1	2.778	2.778	2.778
	1996	2	5.556	5.556	8.333
	1997	4	11.111	11.111	19.444
	1998	3	8.333	8.333	27.778
	1999	4	11.111	11.111	38.889
	2000	8	22.222	22.222	61.111
	2001	3	8.333	8.333	69.444
	2002	4	11.111	11.111	80.556
	2003	3	8.333	8.333	88.889
	2004	2	5.556	5.556	94.444
	2006	2	5.556	5.556	100.000
Missing	0	0.000			
Total		36	100.000		

**Table B.10:** Frequencies for Year of Birth (N=69) with Mindset Slip

Mindset	Work_Exp	Frequency	Percent	Valid Percent	Cumulative Percent
FM	0 to 1 Year	6	18.182	18.182	18.182
	1 to 2 Years	8	24.242	24.242	42.424
	2 to 4 Years	9	27.273	27.273	69.697
	4+ Years	10	30.303	30.303	100.000
	Missing	0	0.000		
Total		33	100.000		
GM	0 to 1 Year	5	13.889	13.889	13.889
	1 to 2 Years	8	22.222	22.222	36.111
	2 to 4 Years	12	33.333	33.333	69.444
	4+ Years	11	30.556	30.556	100.000
	Missing	0	0.000		
Total		36	100.000		

**Table B.11:** Frequencies for Work Experience (N=69) with Mindset Slip

Mindset	Nationality	Frequency	Percent	Valid Percent	Cumulative Percent
FM	American	3	9.091	9.091	9.091
	British	12	36.364	36.364	45.455
	Canadian	6	18.182	18.182	63.636
	Filipino	1	3.030	3.030	66.667
	Israeli	1	3.030	3.030	69.697
	Kenyan	1	3.030	3.030	72.727
	Nigerian	0	0.000	0.000	72.727
	South African	8	24.242	24.242	96.970
	Ugandan	1	3.030	3.030	100.000
	Australian	0	0.000	0.000	100.000
	Missing	0	0.000		
	Total	33	100.000		
GM	American	3	8.333	8.333	8.333
	British	13	36.111	36.111	44.444
	Canadian	10	27.778	27.778	72.222
	Filipino	1	2.778	2.778	75.000
	Israeli	0	0.000	0.000	75.000
	Kenyan	0	0.000	0.000	75.000
	Nigerian	4	11.111	11.111	86.111
	South African	4	11.111	11.111	97.222
	Ugandan	0	0.000	0.000	97.222
	Australian	1	2.778	2.778	100.000
	Missing	0	0.000		
	Total	36	100.000		

**Table B.12:** Frequencies for Nationality (N=69) with Mindset Slip