

Does Emotional Intelligence Reduce Problematic Social Media Use and Procrastination Through Self-Control Among Generation Z? A Gender-Based Multi-Group Analysis

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Abstract

Problematic social media use and procrastination have become major behavioural challenges among Generation Z students. However, previous studies have primarily focused on the direct effects of Emotional Intelligence, while the psychological mechanism underlying these relationships remains insufficiently understood. This study aims to examine the effects of emotional intelligence on problematic social media use and procrastination, investigate the mediating role of self-control, and compare the structural relationships between male and female students using Multi-Group Analysis (MGA). A quantitative explanatory approach was employed using data collected from 226 Generation Z respondents through a structured questionnaire. The proposed model was analysed using Partial Least Squares Structural Equation Modeling (PLS-SEM) and MGA. The findings indicate that emotional intelligence does not significantly reduce problematic social media use but significantly reduces procrastination behaviour and positively influences self-control. Furthermore, self-control significantly reduces both problematic social media use and procrastination behaviour and mediates the relationships between emotional intelligence and both behavioural outcomes. This study contributes to the literature by demonstrating that self-control serves as an underlying psychological mechanism linking emotional intelligence with adaptive digital behaviour among Generation Z. The findings provide practical implications for educational institutions to strengthen emotional intelligence and self-control in promoting digital well-being.

Keywords: emotional intelligence; self-control; problematic social media use; procrastination; multi-group analysis

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Introduction

Indonesia is currently at the peak of its demographic bonus, where the dominance of Generation Z as digital natives creates a very high dependency on the digital ecosystem (Devina Heriyanto et al., 2024). As a generation that grew up alongside massive internet penetration, Gen Z has behavioral patterns and lifestyles that are highly integrated with digital technology (Auliya & Winarsih, 2024). Social media platforms nowadays no longer merely serve as means of communication, but have transformed into primary interaction spaces that shape daily social, academic, and professional activities (Nurohmat et al., 2024). Behind these various benefits, intensive social media use also triggers various psychological and behavioral challenges that are increasingly gaining academic attention (Süral et al., 2019).

This high vulnerability is inseparable from the continuously increasing intensity of social media use. According to Kompas (2025), social media use in Indonesia is dominated by Generation Z at 48%

with an average usage duration of 1–5 hours per day. Indonesia is also one of the countries with the largest number of active Instagram and TikTok users in the world (Mediatrics, 2024). Excessive exposure to social media can reduce an individual's ability to maintain focus and control attention, thereby increasing the risk of Problematic Social Media Use (PSMU), which is a pattern of excessive, hard-to-control social media use that results in negative consequences for the individual's psychological and social functions (Yuniar et al., 2025; Zahrai & Ballantine, 2022). Recent studies show that PSMU is not only related to impaired psychological well-being but also impacts academic function, sleep quality, and users' self-regulation capabilities (Guan et al., 2025).

The phenomenon of PSMU can be explained through the perspective of dual-system theory, which emphasizes the interaction between the impulsive system and the reflective system in behavioral decision-making. Zahrai & Ballantine. (2022) explain that individuals with problematic levels of social media use tend to experience a dominance of the impulsive system over the reflective system, making it more difficult to control the urge for excessive social media use. When these impulsive urges fail to be regulated, various negative consequences can emerge, such as disrupted concentration, decreased psychological well-being, and the appearance of maladaptive behaviors that hinder individual productivity (Nurohmat et al., 2024). One of the most frequently found consequences is the increased tendency to engage in Procrastination Behavior (Yuniar et al., 2025).

Procrastination does not only represent a failure in managing time, but also reflects an individual's failure in regulating emotions and controlling behavior. Rahimi et al. (2023) show that procrastination is closely related to emotion regulation, where anxiety, boredom, and academic pressure often drive individuals to avoid tasks and switch to activities that offer instant gratification, including social media use. This finding aligns with Rasouli & Soumee. (2025), which demonstrates that problematic social media use can increase the tendency for academic procrastination through a decline in individuals' self-control capabilities. Therefore, internal psychological factors capable of helping individuals manage emotions and control behavior are becoming increasingly important to study.

One factor that has received much attention is Emotional Intelligence (EI). According to Wong & Law. (2002), emotional intelligence refers to an individual's ability to effectively understand, assess, use, and manage one's own emotions and the emotions of others. In the context of social media use, individuals with high emotional intelligence tend to be more capable of managing psychological pressure, coping with social anxiety, and avoiding the use of social media as an emotional escape mechanism (Naidu et al., 2023). Several studies show that emotional intelligence is negatively related to various forms of problematic online behavior, including problematic social media use (Kircaburun et al., 2018). This finding is also reinforced by Guan et al. (2025), who found that emotional intelligence has a negative effect on problematic social media use among university students. Furthermore, results of a recent systematic review indicate that low emotional intelligence is consistently linked to an increased risk of problematic social media use in adolescents and young adults (Piccerillo & Digennaro, 2025). Because both Problematic Social Media Use and Procrastination Behaviour involve failures in emotional and behavioural regulation, researchers have increasingly considered Emotional Intelligence as a potential psychological resource for reducing these maladaptive behaviours.

Emotional intelligence also plays an important role in reducing the tendency to procrastinate. Individuals who can effectively recognize and manage their emotions tend to be more capable of facing academic pressure, maintaining motivation, and completing tasks on time. Various studies have found that emotional intelligence has a negative relationship with academic procrastination (Zhang et al., 2024). However, previous research findings still show inconsistencies. Mappakaya et al. (2016) found that emotional intelligence does not have a significant relationship with academic procrastination in a specific group of university students. This inconsistency indicates that the influence of emotional intelligence on individual behavior likely does not operate directly, but rather through other psychological mechanisms that bridge the relationship.

Based on Self-Regulation Theory, one mechanism that potentially explains this relationship is Self-Control. Self-control is an individual's ability to control impulses, regulate internal responses, and resist behavior that is inconsistent with long-term goals (Tangney et al., 2004). Individuals with high levels of self-control tend to be better at managing the urge to use social media excessively and are more capable of completing tasks without procrastinating (Zahrai & Ballantine, 2022; Zhao et al., 2021). Recent research also shows that self-control has a negative influence on problematic social media use (Fajria et al., 2025) and academic procrastination (Rasouli & Soumee, 2025). On the other hand, research on Indonesian adolescent and student populations shows that emotional intelligence is positively related to self-control, so individuals who are good at managing their emotions tend to have higher self-control capabilities (Mujibah & Winarsih, 2024). Similar findings were also obtained by (Wahyuningrum & Harsono, 2025), indicating that self-control can act as a mediating mechanism in explaining the influence of emotional intelligence on individual behavior.

Although previous studies have examined the relationship between emotional intelligence and problematic online behaviour, most of them have focused on the direct effect of emotional intelligence on maladaptive digital behaviour (Kircaburun et al., 2018). Previous research has also examined emotional intelligence and procrastination, but it has mainly emphasized procrastination as a problem of emotional regulation (Guo et al., 2019). In addition, self-control has been shown to play an important role in reducing excessive social media use (Zahrai & Ballantine, 2022). Self-control has also been identified as a key factor in explaining procrastination from the perspective of self-regulation theory (Zhao et al., 2021). However, it remains unclear whether Emotional Intelligence reduces Problematic Social Media Use and Procrastination Behaviour directly or indirectly through Self-Control as an underlying psychological mechanism. Consequently, the process through which emotional competence is translated into adaptive digital behaviour among Generation Z remains insufficiently understood.

This gap is important because problematic social media use has been associated with procrastination behaviour among digitally connected young users (Yuniar et al., 2025). Furthermore, previous studies have not sufficiently explained whether self-control can translate emotional competence into healthier digital behaviour and lower procrastination tendencies among Generation Z (Rasouli & Soumee, 2025). Moreover, previous findings regarding gender differences in emotional regulation, self-control, and digital behaviour remain inconclusive, making it necessary to examine whether the proposed structural relationships are consistent across male and female Generation Z students. Therefore, the novelty of this study lies in positioning Self-Control as a mediating psychological mechanism linking Emotional Intelligence with Problematic Social Media Use and Procrastination Behaviour while simultaneously examining the consistency of these structural relationships across gender using Multi-Group Analysis (MGA).

Based on these gaps, this study aims to analyze the influence of emotional intelligence on problematic social media use and procrastination behaviour in Generation Z. This study also tests the mediating role of self-control in explaining the relationship between emotional intelligence and both behaviours. Additionally, this study performs a Multi-Group Analysis (MGA) based on gender to identify possible differences in structural relationships between male and female groups.

Theoretical Background

Dual-System Theory

Dual-System Theory explains that human behavior is governed by the interaction of two cognitive systems: an impulsive system that operates automatically and seeks immediate gratification, and a reflective system that relies on deliberate reasoning, self-monitoring, and long-term goal evaluation (Turel & Qahri-Saremi, 2016). The impulsive system responds rapidly to attractive stimuli with minimal cognitive effort, whereas the reflective system enables individuals to evaluate potential consequences before making behavioral decisions (Turel & Qahri-Saremi, 2016). In digital environments, social media platforms continuously activate the impulsive system through personalized

algorithms, notifications, and instant rewards, encouraging repetitive checking behavior and increasing the risk of excessive social media use (Zahrai & Ballantine, 2022). When the reflective system fails to regulate these impulses effectively, individuals become more vulnerable to maladaptive digital behaviors, including Problematic Social Media Use and behaviors that interfere with academic responsibilities (Zahrai & Ballantine, 2022).

From the perspective of Dual-System Theory, Emotional Intelligence can be understood as a psychological resource that strengthens the reflective system by enabling individuals to recognize, understand, and regulate their emotional responses when facing stress, boredom, loneliness, or academic pressure (Wong & Law, 2002). This emotional capacity helps individuals evaluate emotional triggers before responding impulsively, thereby reducing the tendency to use social media as an escape from unpleasant emotions (Wong & Law, 2002). Accordingly, individuals with higher Emotional Intelligence are expected to exercise greater reflective control over digital temptations and exhibit lower levels of Problematic Social Media Use (Zahrai & Ballantine, 2022).

Self-Regulation Theory

Self-Regulation Theory explains that individuals continuously monitor, evaluate, and regulate their thoughts, emotions, and behaviors to achieve desired long-term goals (Sirois & Pychyl, 2013). Successful self-regulation requires individuals to inhibit impulsive responses, manage emotional discomfort, and maintain goal-directed behavior despite immediate temptations (Zhao et al., 2021). In academic settings, failures in self-regulation often manifest as procrastination because individuals prioritize short-term emotional relief over task completion (Sirois & Pychyl, 2013). Likewise, in digital environments, insufficient self-regulation makes individuals more susceptible to excessive social media use because immediate online gratification often overrides long-term academic objectives (Zhao et al., 2021).

Self-Regulation Theory also provides a complementary explanation for the relationship between Emotional Intelligence and Procrastination Behaviour. Procrastination is not merely a problem of poor time management but reflects a failure of self-regulation in which individuals delay important tasks to obtain temporary emotional relief (Sirois & Pychyl, 2013). Students may postpone academic responsibilities when they experience anxiety, boredom, frustration, or fear of failure associated with academic tasks (Rahimi et al., 2023). Individuals with higher Emotional Intelligence are generally more capable of regulating these negative emotions, enabling them to remain engaged with academic tasks and reducing the likelihood of procrastination (Wong & Law, 2002).

However, Emotional Intelligence alone may not always be sufficient to reduce Problematic Social Media Use and Procrastination Behaviour. Emotional awareness does not automatically translate into adaptive behavior when individuals lack the ability to regulate their actions consistently. Therefore, Self-Control becomes an essential self-regulatory mechanism that enables individuals to suppress impulses, delay gratification, and maintain behaviors consistent with long-term goals (Zhao et al., 2021). In digital contexts, Self-Control functions as an internal regulatory mechanism that limits excessive social media use (Leijse et al., 2023), whereas in academic contexts it helps students maintain concentration and resist distractions that trigger procrastination (Kalyaniti et al., 2025).

Building upon Dual-System Theory and Self-Regulation Theory, this study integrates both perspectives to explain the relationships among Emotional Intelligence, Self-Control, Problematic Social Media Use, and Procrastination Behaviour. Dual-System Theory explains how Emotional Intelligence strengthens the reflective system to regulate impulsive digital behavior, whereas Self-Regulation Theory explains that Self-Control functions as the behavioral mechanism through which emotional competence is translated into goal-directed actions (Turel & Qahri-Saremi, 2016; Zhao et al., 2021). Accordingly, this study positions Self-Control as a mediating psychological mechanism linking Emotional Intelligence with Problematic Social Media Use and Procrastination Behaviour. Furthermore,

this study examines whether these structural relationships differ between male and female Generation Z students through Multi-Group Analysis (MGA), thereby providing a more comprehensive understanding of the proposed research model.

Literature Review

Emotional intelligence

Emotional Intelligence is defined as an individual's ability to monitor, assess, manage, and regulate their own emotions as well as the emotions of others to guide thought patterns and actions (Wong & Law, 2002). In the context of organizations and individual psychology, EI encompasses four main dimensions: self-emotional awareness, awareness of others' emotions, emotional use, and emotional regulation (Wong & Law, 2002). Generation Z, having grown up in the digital age, critically needs EI as a psychological shield to filter and respond to intense emotional stimuli from the virtual world such as cyberbullying or exposure to negative content to prevent excessive stress or anxiety (Auliya & Winarsih, 2024).

Problematic social media use

Problematic Social Media Use (PSMU) is a maladaptive condition in which individuals lose control over their social media use, leading to significant negative consequences and dysfunction in daily life (Leijse et al., 2023). PSMU is characterized by symptoms such as cognitive preoccupation, tolerance, withdrawal symptoms when access is cut off, and conflict with the surrounding environment (Yuniar et al., 2025). For Gen Z, PSMU serves as an escape from reality when individuals feel unable to directly confront social or academic pressures.

Procrastination

Procrastination is defined as a failure of self-regulation in which an individual consciously, voluntarily, and irrationally delays the execution or completion of important tasks, despite knowing that such delay will have negative consequences (Wypych et al., 2019). From a neurocognitive perspective, procrastination is closely linked to weaknesses in brain activity related to error processing and anticipating punishment, and is considered a form of failure to regulate negative emotions such as boredom or anxiety regarding tasks (Wypych et al., 2019). Procrastination often overlaps with technology use; individuals seek instant gratification through social media to avoid the discomfort caused by the burden of tasks (Yuniar et al., 2025).

Self-control

Self-control is an individual's cognitive and executive capacity to suppress impulsive urges, modify automatic responses, and delay immediate gratification in order to achieve more valuable long-term goals (Kalyaniti et al., 2025). This conceptualization is consistent with the strength model of self-control, which defines self-control as the capacity to override dominant impulses and regulate behavior in accordance with long-term goals (Baumeister et al., 2007). In digital interactions, self-control functions as an internal brake mechanism that allows individuals to limit their social media exposure amidst the temptations of digital algorithms (Leijse et al., 2023). Furthermore, good self-control has consistently been shown to help individuals maintain discipline in fulfilling their responsibilities and reduce the tendency to procrastinate (Kalyaniti et al., 2025).

Hypothesis Development

Based on the theoretical integration presented above, this study argues that Emotional Intelligence promotes healthier digital and academic behaviour by strengthening emotional awareness and emotion regulation. However, emotional competence may not directly influence behavioural

outcomes unless it is translated into behavioural regulation through Self-Control. Therefore, the following hypotheses are developed to examine the direct effects of Emotional Intelligence, the mediating role of Self-Control, and the consistency of these structural relationships across gender.

Emotional Intelligence and Problematic Social Media Use

Individuals with high emotional intelligence have the ability to manage stress, anxiety, and social pressure more adaptively, so they do not depend on social media as a means of emotional escape. From the perspective of Self-Regulation Theory, individuals who are capable of regulating their emotions are more likely to regulate their behaviour because emotional regulation facilitates behavioural control toward long-term goals (Zhao et al., 2021). Conversely, individuals with low emotional intelligence tend to use social media excessively to obtain psychological comfort or social validation. Previous studies show that emotional intelligence is negatively related to various forms of problematic online behavior, including problematic social media use (Kircaburun et al., 2018). Additionally, Naidu et al. (2023) found that individuals with higher emotional intelligence have a lower risk of experiencing problematic social media use. Recent findings from Guan et al. (2025) and the results of a systematic review by Piccerillo & Digennaro. (2025) also indicate that emotional intelligence is a protective factor against problematic social media use.

H1: Emotional Intelligence has a negative effect on Problematic Social Media Use.

Emotional Intelligence and Procrastination Behavior

Procrastination is often viewed as an individual's failure to manage negative emotions that arise when facing a task considered difficult, boring, or causing anxiety. Individuals with high emotional intelligence possess better capabilities in controlling these emotions, thereby enabling them to maintain motivation and focus on task completion. Guo et al. (2019) found that university students with high emotional intelligence tend to have lower levels of procrastination. Research results from Chavez-Fernandez et al. (2024) and Zhang et al. (2024) also show that the ability to manage emotions contributes to a decrease in academic procrastination tendencies. Therefore, emotional intelligence is expected to be able to reduce procrastination behavior in Generation Z.

H2: Emotional Intelligence has a negative effect on Procrastination Behavior.

Emotional Intelligence and Self-Control

Emotional intelligence is an individual's ability to effectively understand, evaluate, and manage emotions in various situations (Wong & Law, 2002). Individuals with high levels of emotional intelligence tend to be able to recognize emerging emotional urges and control responses that are not aligned with long-term goals. This ability allows individuals to be more careful in decision-making and avoid impulsive behaviors. Previous research shows that emotional intelligence is positively related to self-control because individuals who can effectively manage their emotions tend to have better self-control capabilities (Auliya & Winarsih, 2024; Mujibah & Winarsih, 2024). Similar findings were also obtained by Wahyuningrum & Harsono. (2025), which showed that emotional intelligence has a positive effect on self-control.

H3: Emotional Intelligence has a positive effect on Self-Control.

Self-Control and Problematic Social Media Use

Self-control is an individual's ability to control impulses, delay momentary gratification, and direct behavior according to long-term goals (Tangney et al., 2004). In the context of social media use, self-control functions as an internal mechanism that helps individuals limit excessive social media use despite various stimuli that attract attention. Individuals with low levels of self-control tend to find it harder to control the urge to continuously access social media, making them more vulnerable to experiencing problematic social media use. Research by (Pilatti et al., 2021) shows that low self-

regulation capacity is related to increased problematic social media use. This finding is reinforced by Fajria et al. (2025), who found that self-control has a negative effect on problematic social media use.

H4: Self-Control has a negative effect on Problematic Social Media Use.

Self-Control and Procrastination Behavior

In the perspective of self-regulation theory, self-control is an important mechanism that helps individuals maintain focus on established goals and avoid behaviors that can hinder the achievement of those goals. Individuals with high levels of self-control tend to be able to control distractions, reject instant gratification, and remain consistent in completing tasks. Conversely, individuals with low self-control are more easily distracted and tend to delay work that needs to be completed. Zhao et al. (2021) found that self-control has a significant negative relationship with procrastination. Research results by Kalyaniti et al. (2025) and Rasouli & Soumee. (2025) also demonstrate that self-control is an important factor in lowering procrastination tendencies.

H5: Self-Control has a negative effect on Procrastination Behavior.

The Mediating Role of Self-Control in the Relationship between Emotional Intelligence and Problematic Social Media Use

According to Self-Regulation Theory, an individual's ability to manage emotions does not always directly affect behavior, but often works through self-regulation mechanisms. Individuals with high emotional intelligence tend to have better self-control capabilities, thereby enabling them to control the urge to use social media excessively. On the other hand, high self-control helps individuals reduce impulsive behavior and maintain social media use at a reasonable level. Findings by Wahyuningrum & Harsono. (2025) indicate that self-control can act as a mediating mechanism in explaining the influence of emotional intelligence on individual behavior. Emotional intelligence enables individuals to recognise and regulate emotional responses, whereas self-control translates this emotional capability into behavioural regulation by helping individuals resist digital temptations and maintain goal-directed behaviour. Therefore, self-control is expected to be a mechanism that bridges the influence of emotional intelligence on problematic social media use.

H6: Self-Control mediates the influence of Emotional Intelligence on Problematic Social Media Use.

The Mediating Role of Self-Control in the Relationship between Emotional Intelligence and Procrastination Behavior

Emotional intelligence helps individuals recognize and manage negative emotions that arise during the task completion process. However, this ability needs to be translated into actual actions through self-control so that individuals are able to maintain focus and avoid task-delaying behavior. Individuals with high emotional intelligence tend to have better self-control, making them more capable of resisting distractions and remaining committed to task completion. Research by Zhang et al. (2024) indicates that the relationship between emotional intelligence and procrastination can be explained through certain psychological mechanisms related to self-regulation. In addition, Rasouli & Soumee. (2025) found that self-control is an important factor in explaining the emergence of procrastination behavior. Although emotional intelligence helps individuals understand and regulate negative academic emotions, effective task completion also requires behavioural control that enables individuals to resist distractions and remain committed to long-term academic goals. Therefore, self-control is expected to play a role as a mediator in the relationship between emotional intelligence and procrastination behavior.

H7: Self-Control mediates the influence of Emotional Intelligence on Procrastination Behavior.

In addition to examining the proposed mediation model, this study further compares the

structural relationships between male and female respondents using Multi-Group Analysis (MGA). Previous studies have reported inconsistent findings regarding gender differences in emotional regulation, self-control, and digital behaviour. Therefore, MGA is employed to determine whether the proposed relationships remain invariant across gender groups.

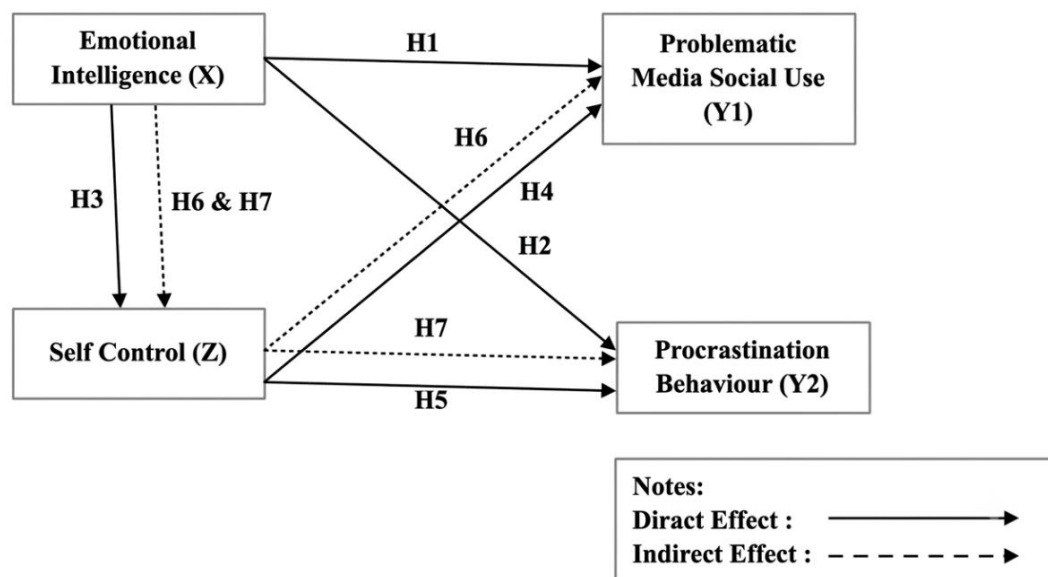


Figure 1. Theoretical Framework

Methods

Design and data collection

This study employed a quantitative approach with an explanatory research design to examine the causal relationships among Emotional Intelligence, Problematic Social Media Use, Procrastination Behaviour, and Self-Control. Specifically, the study investigated the direct effects of Emotional Intelligence on Problematic Social Media Use and Procrastination Behaviour, while examining the mediating role of Self-Control in explaining these relationships. In addition, this study conducted a Multi-Group Analysis (MGA) based on gender to examine whether the proposed structural relationships differed between male and female respondents.

The population of this study consisted of Generation Z students enrolled in universities in Indonesia. This population was selected because Generation Z represents a digitally intensive group that is highly exposed to social media platforms and is therefore relevant to the examination of problematic social media use and procrastination behavior. Focusing on this group allows for a more precise analysis of how academic demands relate to students' digital behavior. A non-probability sampling approach using purposive sampling was employed to select respondents who met the objectives of the study. The inclusion criteria were: (1) born between 1997 and 2012; (2) active users of at least two social media applications (Instagram, TikTok, Facebook, X, or YouTube); and (3) having an average daily social media usage of 1–5 hours.

To ensure the relevance of the sample, respondents were screened before completing the questionnaire. The screening questions covered respondents' year of birth, student status, social media platforms used, and daily social media usage intensity. Data were collected from January to April 2026 through a structured online questionnaire distributed only to respondents who fulfilled the inclusion criteria. Participation in this study was voluntary, and respondents were informed that all responses

would be used solely for academic purposes. This study also adhered to research ethics by ensuring transparency in sample selection, obtaining informed consent from all participants, and protecting respondents' personal information throughout the research process.

Several potential biases were acknowledged. First, the use of purposive sampling may limit the generalizability of the findings to all Generation Z students in Indonesia. Second, self-selection bias may occur because respondents who voluntarily participated may differ from those who chose not to participate. Third, response bias may arise because all data were collected through self-reported questionnaires. To minimize these potential biases, the questionnaire employed clear statements, standardized response options, and voluntary participation procedures.

Respondent characteristics

This study involved 226 respondents representing Generation Z in Indonesia who fulfilled all inclusion criteria established for this study. Based on the demographic profile, the respondents were equally distributed by gender, consisting of 113 male respondents (50%) and 113 female respondents (50%). Regarding marital status, the majority of respondents were unmarried (97.8%), while only 2.2% were married. These characteristics indicate that the respondents generally represent Generation Z individuals who are in the early stages of adulthood. Regarding educational background, most respondents had completed senior high school or equivalent education (54.0%), followed by respondents with a bachelor's degree (43.8%). A small proportion had completed a three-year vocational program (0.9%), while only 0.4% had completed a four-year vocational program, master's degree, or doctoral degree. Furthermore, all respondents (100%) reported using social media every day, indicating intensive engagement with digital platforms. This respondent profile demonstrates that the selected sample is highly relevant to the objectives of this study, as it represents Generation Z individuals with intensive social media exposure who are appropriate for examining the relationships among Emotional Intelligence, Self-Control, Problematic Social Media Use, and Procrastination Behaviour.

Measures

This study used 35 statement items to measure four construct variables. All items were measured using a 5-point Likert scale, ranging from 1 (Strongly Disagree) to 5 (Strongly Agree).

First, Emotional Intelligence (EI) was measured using 9 statement items adapted from the Wong and Law Emotional Intelligence Scale (WLEIS) (Wong & Law, 2002). This instrument consists of four dimensions: Self-Emotion Appraisal (SEA) (3 items), Others' Emotion Appraisal (OEA) (2 items), Use of Emotion (UOE) (2 items), and Regulation of Emotion (ROE) (2 items). These dimensions are relevant to this study because Emotional Intelligence is conceptualized as an emotional regulation resource that enables individuals to recognize, understand, and manage emotional responses associated with digital behaviour and academic demands. Second, Problematic Social Media Use (PSMU) was measured using 11 items (selected from the original 18-item scale) adapted and modified from Mazlum & Atalay. (2022) and Przybylski et al. (2013). The selected items represent the core behavioural symptoms of PSMU, including compulsive checking, excessive preoccupation with social media, difficulty reducing usage, emotional discomfort when access is restricted, and conflicts resulting from excessive social media use. Third, Procrastination Behaviour was measured using 5 statement items adapted from the procrastination scale developed by Alblwi et al. (2021). These items capture individuals' tendencies to delay important tasks, avoid unpleasant responsibilities, and prioritize social media activities over academic or productive obligations. Fourth, Self-Control, serving as the mediating variable, was measured using 10 items (selected from the original 36-item scale) developed based on the Self-Control Scale proposed by Tangney et al. (2004). Self-Control was operationalized as the capacity to resist impulses, maintain discipline, sustain concentration, adhere to planned schedules, and avoid behaviours that provide immediate gratification but may interfere with long-term academic goals.

Data analysis

The collected data were analysed using SmartPLS 3 following the Partial Least Squares Structural Equation Modeling (PLS-SEM) procedure recommended by Hair et al. (2019). First, the measurement model was evaluated through indicator reliability, internal consistency reliability, convergent validity, and discriminant validity. Second, the structural model was assessed by examining collinearity using the Variance Inflation Factor (VIF), explanatory power (R^2), effect size (f^2), predictive relevance (Q^2), and hypothesis testing using the bootstrapping procedure. Third, the mediating role of Self-Control was evaluated using indirect effect analysis. Finally, Multi-Group Analysis (MGA) was performed to compare the structural relationships between male and female respondents.

Tabel 1. Measurement Items

Variabel	Source
Emotional Intelligence I have a good understanding of why I have certain feelings most of the time. I have a good understanding of my own emotions. I truly understand what I am feeling. I am sensitive to the feelings and emotions of others. I have a good understanding of the emotions of people around me. I always set goals for myself and try my best to achieve them. I am a self-motivated person. I am able to control my emotions and overcome difficulties rationally. I have good control over my own emotions.	(Wong & Law, 2002)
Problematic Social Media Use I always make time to use social media (posting, reading comments, reading news, or checking what is viral/trending). I always feel driven to check social media even when I should be doing something else. When I go somewhere, the first thing I think about is sharing content on social media. Others have asked me not to use social media, but I do not listen. I have tried to reduce my social media use but have not been successful. I feel like I am missing out on the latest information if I limit my social media use. I feel annoyed when I cannot access social media. I focus more on social media while socializing. I have been criticized by others for spending too much time scrolling through social media. I am more preoccupied with social media when I am with family or friends. The first thing I check when I wake up is my social media notifications.	(Mazlum & Atalay, 2022) (Przybylski et al., 2013)
Procrastination Behaviour I always procrastinate on difficult and unpleasant tasks. I often procrastinate to avoid real-life problems. When I receive a notification, I check it and end up spending time on it even though I have other tasks to do. I choose to spend time on social media instead of doing assignments or getting involved in organizational activities. I choose to spend time on social media instead of pursuing hobbies or exercising.	(Alblwi et al., 2021)
Self Control I avoid doing certain things that are bad for me, even if they are fun. For example, using social media without keeping track of time. People can count on me to stick to a schedule. I rarely change my mind. I am not easily swayed by my moods. I rarely do things impulsively. People would say that I have iron self-discipline. I have worked or studied all night at the last minute. The pleasure of using social media sometimes prevents me from finishing my work. I can concentrate easily. Sometimes I cannot stop myself from doing something, even though I know it is wrong.	(Tangney et al., 2004)

Results and Discussion

Evaluation of the Measurement Model

The measurement model was first evaluated to assess the reliability and convergent validity of the constructs. Convergent validity was examined using outer loadings and Average Variance Extracted (AVE), whereas internal consistency reliability was assessed using Composite Reliability (CR) and

Cronbach's Alpha (CA). According to Hair & Alamer. (2022), indicator loadings above 0.70, AVE values above 0.50, and Composite Reliability and Cronbach's Alpha values above 0.70 indicate acceptable construct validity and reliability.

As presented in Table 2, all indicators in the complete sample as well as in the male and female groups exhibited outer loading values above the recommended threshold of 0.70, ranging from 0.824 to 0.930, indicating satisfactory indicator reliability. In addition, all constructs achieved AVE values ranging from 0.741 to 0.838, Composite Reliability values ranging from 0.960 to 0.976, and Cronbach's Alpha values ranging from 0.948 to 0.973 across the three datasets. Since all values exceeded the recommended thresholds, the results confirm adequate convergent validity and strong internal consistency reliability.

The consistently high outer loading, AVE, Composite Reliability, and Cronbach's Alpha values across the complete sample and both gender groups indicate that the measurement instruments adequately capture their respective latent constructs and demonstrate stable measurement properties. Therefore, the measurement model satisfies the recommended validity and reliability criteria and provides a robust foundation for subsequent discriminant validity assessment, structural model evaluation, mediation analysis, and Multi-Group Analysis (MGA).

Table 2. Convergent Validity and Reliability Assessment.

Item	Male				Female				Complete			
	Loadings	AVE	CR	CA	Loadings	AVE	CR	CA	Loadings	AVE	CR	CA
EI		0.803	0.973	0.969		0.809	0.974	0.970		0.806	0.974	0.970
EI.1.1	0.872				0.929				0.912			
EI.1.2	0.889				0.902				0.898			
EI.1.3	0.900				0.893				0.895			
EI.2.1	0.902				0.910				0.907			
EI.2.2	0.889				0.882				0.884			
EI.3.1	0.907				0.897				0.900			
EI.3.2	0.904				0.893				0.896			
EI.4.1	0.916				0.896				0.903			
EI.4.2	0.887				0.886				0.886			
PRO		0.827	0.960	0.948		0.838	0.963	0.952		0.835	0.962	0.950
PRO.1.1	0.902				0.930				0.922			
PRO.1.2	0.877				0.898				0.892			
PRO.1.3	0.920				0.922				0.921			
PRO.1.4	0.917				0.910				0.912			
PRO.1.5	0.928				0.918				0.921			
PSMU		0.788	0.976	0.973		0.741	0.969	0.965		0.760	0.972	0.968
PSMU.1.1	0.875				0.824				0.844			
PSMU.1.2	0.908				0.848				0.872			
PSMU.1.3	0.863				0.873				0.867			
PSMU.1.4	0.905				0.854				0.875			
PSMU.1.5	0.849				0.860				0.857			

PSMU.1.6	0.912		0.849		0.875							
PSMU.1.7	0.878		0.837		0.852							
PSMU.1.8	0.909		0.867		0.885							
PSMU.1.9	0.903		0.882		0.890							
PSMU.1.10	0.885		0.897		0.892							
PSMU.1.11	0.875		0.878		0.878							
SC		0.780	0.973	0.969		0.772	0.971	0.970		0.774	0.972	0.968
SC.1.1	0.878		0.896		0.890							
SC.1.2	0.877		0.891		0.886							
SC.1.3	0.891		0.906		0.900							
SC.1.4	0.896		0.882		0.885							
SC.1.5	0.877		0.873		0.875							
SC.1.6	0.918		0.871		0.887							
SC.1.7	0.882		0.881		0.881							
SC.1.8	0.833		0.881		0.864							
SC.1.9	0.885		0.840		0.857							
SC.1.10	0.892		0.864		0.874							

Note(s): EI, Emotional Intelligence; PSMU, Problematic Social Media Use; Pro, Procrastination; SC, Self-Control; CR, Composite Reliability; CA, Cronbach's Alpha; AVE, Average Variance Extracted.

Source(s): Table based on primary data collected by the authors

Following the assessment of convergent validity, discriminant validity was evaluated to ensure that each construct represented a distinct concept within the proposed model. Discriminant validity was assessed using the Fornell-Larcker criterion and the Heterotrait-Monotrait Ratio (HTMT), as recommended in PLS-SEM (Fornell & Larcker, 1981; J. Hair & Alamer, 2022). According to the Fornell-Larcker criterion, the square root of the Average Variance Extracted (AVE) for each construct should exceed its correlations with other constructs, whereas HTMT values should remain below the recommended threshold of 0.90. As presented in Table 3, all constructs satisfied both the Fornell-Larcker criterion and the HTMT criterion, confirming satisfactory discriminant validity. Therefore, the measurement model was considered appropriate for subsequent structural model assessment.

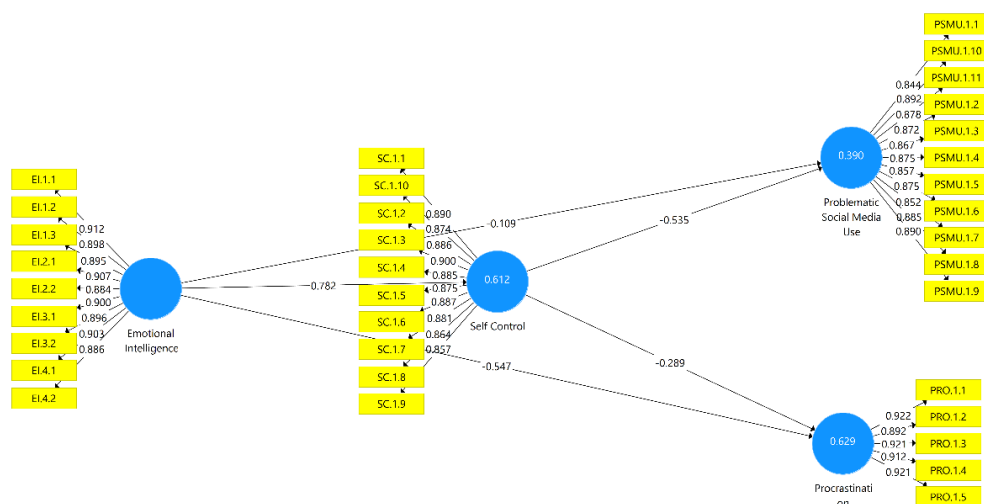


Figure 2. Measurement Model Complete

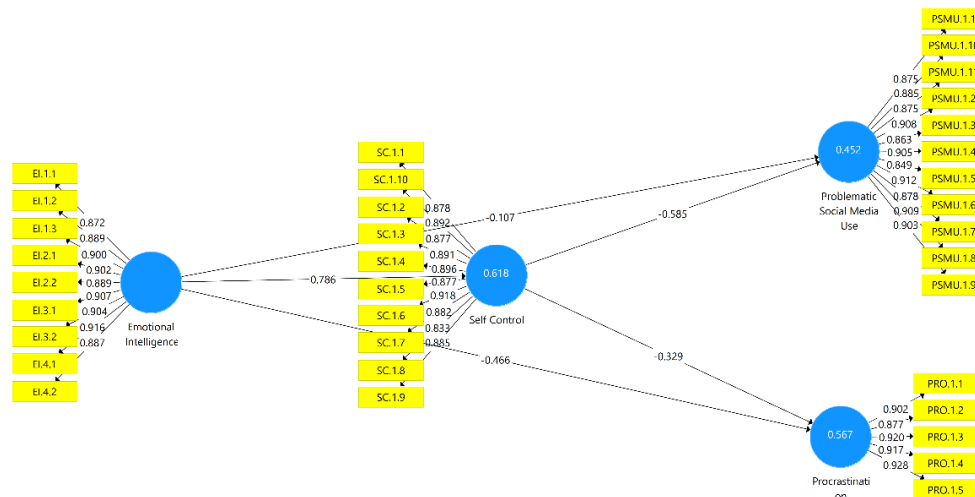


Figure 3. Measurement Model Male

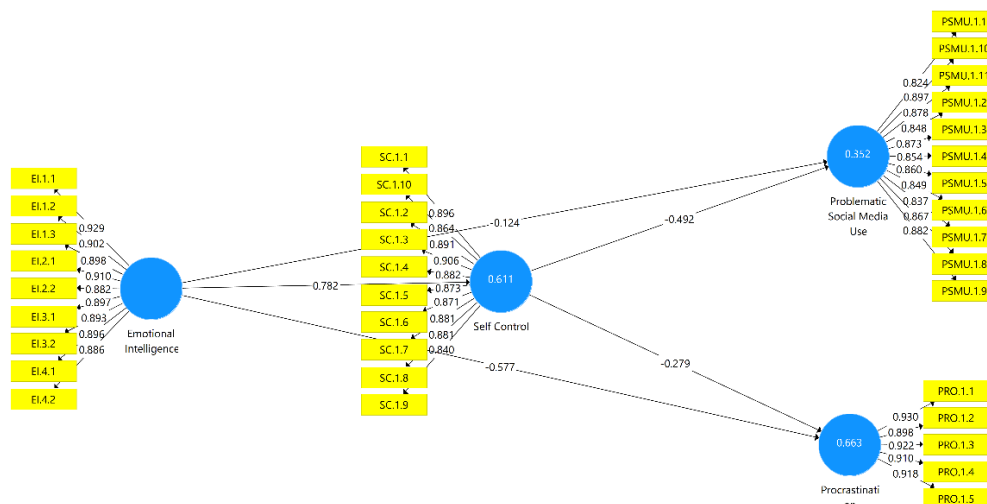


Figure 4. Measurement Model Female

According to J. Hair & Alamer. (2022), HTMT values below 0.90 indicate satisfactory discriminant validity. As presented in Table 3, all HTMT values ranged from 0.458 to 0.807, remaining below the recommended threshold. These findings confirm that each construct is empirically distinct and free from substantial measurement overlap. Overall, the results of both the Fornell-Larcker criterion and HTMT demonstrate that the measurement model possesses adequate discriminant validity, providing a sound basis for subsequent structural model assessment, mediation analysis, and Multi-Group Analysis (MGA).

Table 3. Discriminant validity (Fornell-Larcker criterion and HTMT ratio)

Construct	Fornell Larcker Criterion			
	Emotional Intelligence	Problematic Social Media Use	Procrastination	Self Control
EI	0.898			
PSMU	-0.528	0.872		
PRO	-0.773	0.441	0.914	
SC	0.782	-0.620	-0.716	0.880
Construct	Heterotrait Monotrait Ratio			
	Emotional Intelligence	Problematic Social Media Use	Procrastination	Self Control

EI			
PSMU	0.544		
PRO	0.804	0.458	
SC	0.807	0.640	0.746

Note(s): EI, Emotional Intelligence; PSMU, Problematic Social Media Use; Pro, Procrastination; SC, Self-Control

Source(s): Table based on primary data collected by the authors

Structural Model Assessment

After confirming that the measurement model satisfied the validity and reliability requirements, the structural model was evaluated. Following the procedure recommended by J. Hair & Alamer. (2022), the evaluation began with an assessment of collinearity using the Variance Inflation Factor (VIF), followed by the examination of the coefficient of determination (R^2), effect size (f^2), predictive relevance (Q^2), and hypothesis testing through the bootstrapping procedure. These analyses provide evidence regarding the explanatory power, predictive capability, and significance of the proposed structural relationships.

Table 4. Collinearity Statistic (VIF) Complete

Construct	Emotional Intelligence	Problematic Social Media Use	Procrastination	Self Control
EI		2.577	2.577	1.000
PSMU				
PRO				
SC		2.577	2.577	

Note(s): EI, Emotional Intelligence; PSMU, Problematic Social Media Use; Pro, Procrastination; SC, Self-Control

Source(s): Table based on primary data collected by the authors

As presented in Table 4, all inner VIF values were below the recommended threshold of 3.3, indicating that collinearity was not a concern in the structural model (J. Hair & Alamer, 2022). Therefore, the relationships among the predictor constructs can be interpreted without the risk of multicollinearity affecting the estimation results. After confirming the absence of collinearity issues, the explanatory power of the structural model was evaluated using the coefficient of determination (R^2).

Table 5. R Square (R^2) Complete

Construct	R Square	R Square Adjusted
Problematic Social Media Use	0.390	0.384
Procrastination	0.629	0.626
Self Control	0.612	0.610

Source(s): Table based on primary data collected by the authors

The coefficient of determination (R^2) indicates the proportion of variance in each endogenous construct explained by its predictor constructs. According to J. Hair & Alamer. (2022), R^2 values of approximately 0.75, 0.50, and 0.25 may be interpreted as substantial, moderate, and weak, respectively. As shown in Table 5, the R^2 values indicate the explanatory power of the proposed model for Self-Control, Problematic Social Media Use, and Procrastination Behaviour. To complement the interpretation of the model, the effect size of each structural relationship was subsequently assessed using Cohen's effect size (f^2).

Table 6. F Square (f^2) Complete

Construct	Emotional Intelligence	Problematic Social Media Use	Procrastination	Self Control
EI		0.008	0.313	1.577
PSMU				

PRO		
SC	0.182	0.087

Note(s): EI, Emotional Intelligence; PSMU, Problematic Social Media Use; Pro, Procrastination; SC, Self-Control
Source(s): Table based on primary data collected by the authors

The effect size (f^2) was examined to determine the individual contribution of each exogenous construct to the endogenous constructs. According to Cohen. (1988), f^2 values of 0.02, 0.15, and 0.35 indicate small, medium, and large effects, respectively. As presented in Table 6, the magnitude of the effect sizes varies across the proposed relationships, indicating differences in the relative contribution of each predictor to the endogenous variables. Emotional Intelligence exhibited a negligible effect on Problematic Social Media Use, a medium effect on Procrastination Behaviour, and a large effect on Self-Control, whereas Self-Control showed a medium effect on Problematic Social Media Use and a small effect on Procrastination Behaviour. In addition to explanatory power, the predictive capability of the structural model was assessed using the Stone-Geisser predictive relevance (Q^2).

Table 7. Construct Crossvalidated Redundancy (Q^2) Complete

Construct	SSO	SSE	Q^2
EI	3051.000	3051.000	
PSMU	3729.000	2641.016	0.292
PRO	1695.000	816.785	0.518
SC	3390.000	1833.818	0.459

Note(s): EI, Emotional Intelligence; PSMU, Problematic Social Media Use; Pro, Procrastination; SC, Self-Control
Source(s): Table based on primary data collected by the authors

Predictive relevance was evaluated using the Stone-Geisser criterion (Q^2) obtained through the blindfolding procedure. J. Hair & Alamer. (2022) suggest that Q^2 values greater than zero indicate that the structural model possesses predictive relevance for the endogenous constructs. As shown in Table 7, all endogenous constructs achieved Q^2 values above zero, demonstrating that the proposed model has satisfactory predictive capability. Having confirmed the adequacy of the structural model, the final stage involved testing the proposed hypotheses through the bootstrapping procedure, as presented in Table 8.

The results of the complete sample indicate that Emotional Intelligence has a positive and significant effect on Self-Control ($\beta = 0.782$, $t = 27.673$, $p < 0.001$), supporting H3. Emotional Intelligence also has a negative but insignificant effect on Problematic Social Media Use ($\beta = -0.109$, $t = 1.113$, $p = 0.266$), leading to the rejection of H1. In contrast, Emotional Intelligence has a negative and significant effect on Procrastination Behaviour ($\beta = -0.547$, $t = 9.356$, $p < 0.001$), supporting H2. Furthermore, Self-Control has a negative and significant effect on Problematic Social Media Use ($\beta = -0.535$, $t = 6.215$, $p < 0.001$) and Procrastination Behaviour ($\beta = -0.289$, $t = 4.355$, $p < 0.001$), supporting H4 and H5, respectively.

Regarding the mediation analysis, Self-Control significantly mediates the relationship between Emotional Intelligence and Problematic Social Media Use ($\beta = -0.418$, $t = 5.704$, $p < 0.001$), thereby supporting H6. Likewise, Self-Control significantly mediates the relationship between Emotional Intelligence and Procrastination Behaviour ($\beta = -0.226$, $t = 4.331$, $p < 0.001$), supporting H7. These findings indicate that Emotional Intelligence influences digital behaviour and procrastination not only directly but also indirectly through the enhancement of Self-Control.

Table 8. Results of Hypothesis Testing

Direct Relationships												
Male					Female				Complete			
	β	t	P	Results	β	t	P	Results	β	t	P	Results
EI-> PSMU	-0.107	1.037	0.300	Rejected	-0.124	0.924	0.356	Rejected	-0.109	1.113	0.266	Rejected
EI-> PRO	-0.466	5.022	0.000	Accepted	-0.577	7.338	0.000	Accepted	-0.547	9.356	0.000	Accepted
EI-> SC	0.786	22.908	0.000	Accepted	0.782	20.718	0.000	Accepted	0.782	27.673	0.000	Accepted
SC-> PSMU	-0.585	5.723	0.000	Accepted	-0.499	4.276	0.000	Accepted	-0.535	6.215	0.000	Accepted
SC-> PRO	-0.329	3.283	0.001	Accepted	-0.276	3.141	0.002	Accepted	-0.289	4.355	0.000	Accepted
Mediation Analysis												
Male					Female				Complete			
	β	t	P	Results	β	t	P	Results	β	t	P	Results
EI-> SC-> PSMU	-0.460	5.430	0.000	Accepted	-0.384	3.926	0.000	Accepted	-0.418	5.704	0.000	Accepted
EI-> SC-> PRO	-0.259	3.420	0.001	Accepted	-0.218	3.164	0.002	Accepted	-0.226	4.331	0.000	Accepted

Note(s): Relationships are significant at $p < 0.05$ or $t > 1.96$; β = Beta Coefficient, t = t-statistics, p = Probability (p) Value; EI, Emotional Intelligence; PSMU, Problematic Social Media Use; Pro, Procrastination; SC, Self-Control

Source(s): Table based on primary data collected by the authors

The test results indicate that Emotional Intelligence does not have a significant effect on Problematic Social Media Use ($\beta = -0.109$; t-statistic = 1.113; $p = 0.266$), therefore H1 is rejected. Furthermore, Emotional Intelligence has a significant negative effect on Procrastination Behaviour ($\beta = -0.547$; t-statistic = 9.356; $p < 0.001$), thereby supporting H2. In addition, Emotional Intelligence has a significant positive effect on Self-Control ($\beta = 0.782$; t-statistic = 27.673; $p < 0.001$), supporting H3. These findings suggest that individuals with higher levels of Emotional Intelligence tend to possess stronger Self-Control and are better able to reduce procrastination behaviour.

The results further reveal that Self-Control has a significant negative effect on both Problematic Social Media Use ($\beta = -0.535$; t-statistic = 6.215; $p < 0.001$) and Procrastination Behaviour ($\beta = -0.289$; t-statistic = 4.355; $p < 0.001$), thus supporting H4 and H5. Moreover, the mediation analysis demonstrates that Self-Control significantly mediates the relationship between Emotional Intelligence and Problematic Social Media Use ($\beta = -0.418$; t-statistic = 5.704; $p < 0.001$), thereby supporting H6. Self-Control also significantly mediates the relationship between Emotional Intelligence and Procrastination Behaviour ($\beta = -0.226$; t-statistic = 4.331; $p < 0.001$), supporting H7. Therefore, based on the hypothesis testing results, H2, H3, H4, H5, H6, and H7 are supported, whereas H1 is not supported.

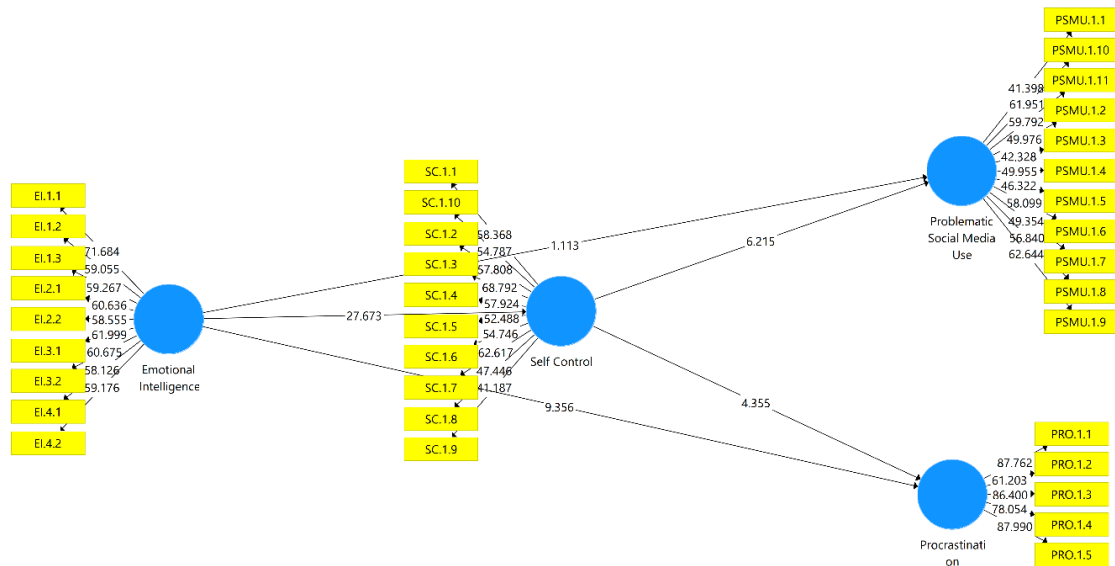


Figure 5. Structural Model Complete

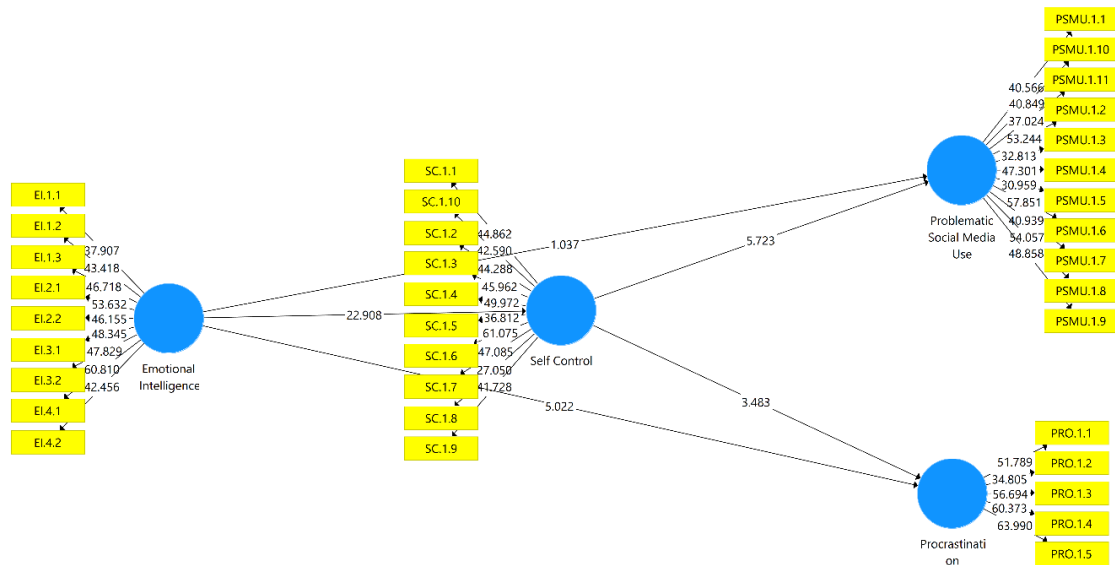


Figure 6. Structural Model Male

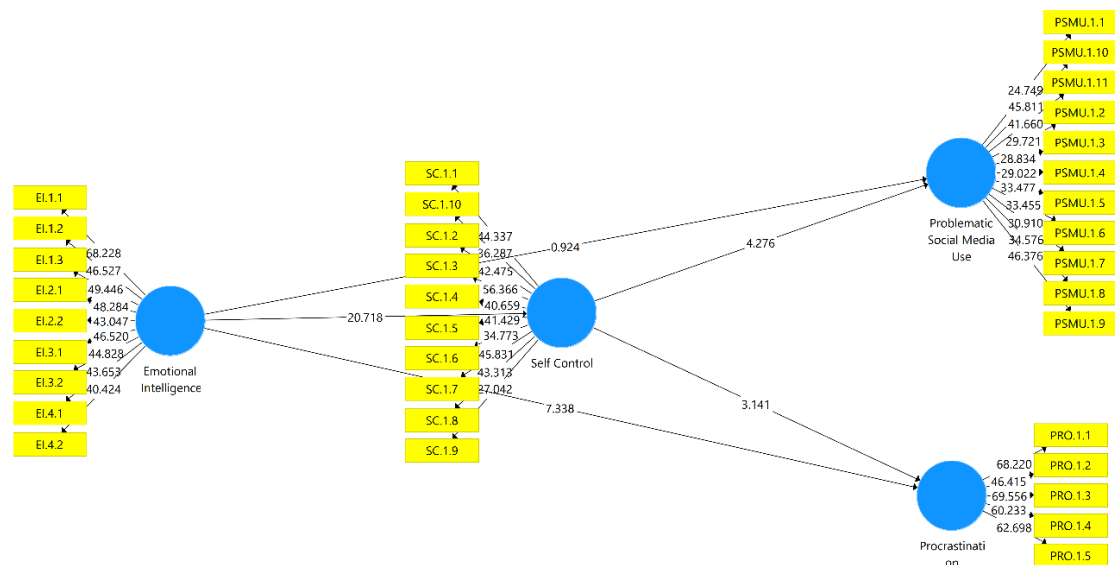


Figure 7. Structural Model Female

Multi-group analysis

The results of the Multi-Group Analysis (MGA), presented in Table 9, compare the structural relationships between male and female respondents. The findings show slight differences in the path coefficients across the two groups. Specifically, the relationships between Emotional Intelligence and Problematic Social Media Use (β -diff = 0.017, p = 0.917), Emotional Intelligence and Procrastination Behaviour (β -diff = 0.111, p = 0.377), Emotional Intelligence and Self-Control (β -diff = 0.005, p = 0.940), Self-Control and Problematic Social Media Use (β -diff = -0.093, p = 0.551), and Self-Control and Procrastination Behaviour (β -diff = -0.050, p = 0.711) all exhibit numerical differences between male and female respondents. However, because all p -values exceed the 0.05 significance threshold, none of these differences are statistically significant. These findings indicate that the proposed structural relationships are consistent across both gender groups.

Table 9. Multi-Group Analysis (MGA)

	Path Coefficients-diff (M vs F)	p-Value (M vs F)
Emotional Intelligence -> Problematic Social Media Use	0.017	0.917
Emotional Intelligence -> Procrastination	0.111	0.377
Emotional Intelligence -> Self Control	0.005	0.940
Self Control -> Problematic Social Media Use	-0.093	0.551
Self Control -> Procrastination	-0.050	0.711

Source(s): Table based on primary data collected by the authors

To further examine whether gender influences the proposed structural relationships, this study conducted a Multi-Group Analysis (MGA) by comparing male and female respondents. As presented in Table 9, all MGA p -values exceeded the significance level of 0.05, indicating that none of the structural paths differed significantly between the two groups. Therefore, gender does not significantly alter the relationships among Emotional Intelligence, Self-Control, Problematic Social Media Use, and Procrastination Behaviour. These findings suggest that the proposed model demonstrates structural stability across male and female Generation Z respondents.

Discussion

This study aims to explain the roles of Emotional Intelligence (EI) and Self-Control (SC) in influencing Problematic Social Media Use (PSMU) and Procrastination Behaviour among Generation Z. This study found that Emotional Intelligence did not significantly reduce Problematic Social Media Use among Generation Z. Although individuals with higher emotional intelligence are generally better able to recognize and regulate their emotions, emotional awareness alone may not be sufficient to reduce excessive social media use in highly stimulating digital environments. Social media platforms continuously provide immediate rewards through notifications, personalized content, and social interaction, making users vulnerable to impulsive behaviour despite possessing good emotional regulation abilities. From the perspective of Dual-System Theory, these findings suggest that the impulsive system may dominate reflective decision-making when digital rewards are constantly available (Turel & Qahri-Saremi, 2016; Zahrai & Ballantine, 2022). Therefore, emotional intelligence alone may not adequately explain problematic social media use without the support of stronger behavioural regulation mechanisms. This finding is consistent with (Zahrai & Ballantine, 2022), who

argued that excessive social media use is primarily driven by failures in behavioural regulation rather than emotional awareness alone.

The results also show that Emotional Intelligence has a negative effect on Procrastination Behaviour and a positive effect on Self-Control. These findings indicate that individuals with higher emotional intelligence tend to possess stronger self-regulatory capabilities and are better able to manage daily pressures and demands without postponing their responsibilities. This may occur because emotionally intelligent individuals are more capable of identifying and regulating negative emotions before they develop into avoidance behaviour. Consequently, rather than escaping from academic demands, they remain engaged with their tasks and maintain their focus on long-term goals. From the perspective of self-regulation theory, this result indicates that procrastination reflects not only poor time management, but also a failure to regulate emotions and behaviour when facing unpleasant or demanding tasks (Zhao et al., 2021). This finding supports Guo et al. (2019), who showed that emotional intelligence contributes to lower procrastination tendencies among students.

Furthermore, Self-Control was found to have a significant negative effect on both PSMU and Procrastination Behaviour. This finding indicates that self-control enables individuals to interrupt automatic behavioural responses triggered by digital temptations. Rather than responding immediately to notifications or entertainment content, individuals with higher self-control are more capable of prioritizing long-term academic goals over short-term gratification. Theoretically, this confirms the central role of self-control as a self-regulatory capacity that helps individuals resist digital distractions and maintain goal-directed behaviour (Tangney et al., 2004). This result supports the arguments of Zahrai & Ballantine. (2022) and Zhao et al. (2021), who proposed that self-control functions as a key mechanism that helps individuals cope with distractions and temptations within the digital environment.

Beyond the direct effects, this study also found that Self-Control significantly mediates the relationships between Emotional Intelligence and PSMU, as well as between Emotional Intelligence and Procrastination Behaviour. These findings suggest that the influence of emotional intelligence on individual behavior operates not only directly but also indirectly through enhanced self-control. Individuals with higher emotional intelligence are more likely to develop stronger self-control, which subsequently helps them reduce problematic social media use and procrastination tendencies. Therefore, Self-Control serves as a psychological mechanism that translates emotional competence into more adaptive digital behaviour and higher productivity among Generation Z. These findings indicate that emotional intelligence does not automatically translate into adaptive behaviour; rather, its influence operates through the development of self-control, which enables individuals to regulate impulses and maintain goal-directed behaviour. Thus, self-control acts as a bridge between emotional competence and adaptive behaviour, supporting the perspective of Self-Regulation Theory (Baumeister et al., 2007). Interestingly, although Emotional Intelligence did not directly reduce Problematic Social Media Use, it exerted a significant indirect effect through Self-Control. This finding suggests that emotional awareness alone is insufficient to reduce excessive social media use unless it is translated into behavioural regulation through self-control.

Another noteworthy finding emerges from the Multi-Group Analysis (MGA), which revealed no significant differences between male and female respondents across all tested relationships. This indicates that the effects of Emotional Intelligence and Self-Control on PSMU and Procrastination Behaviour are relatively consistent across gender groups. One possible explanation is that both male and female Generation Z students are exposed to similar digital environments, academic demands, and

social media platforms. Consequently, both groups experience comparable emotional challenges and digital distractions, resulting in similar emotional regulation and self-control mechanisms regardless of gender. These findings suggest that gender is not a determining factor in explaining the proposed relationships, indicating that the underlying psychological mechanisms operate similarly across male and female Generation Z students.

Overall, these findings extend previous literature by demonstrating that emotional intelligence influences adaptive behaviour both directly and indirectly through self-control. The results further suggest that self-control represents an important psychological mechanism linking emotional competence with behavioural regulation in digital environments. Therefore, integrating Emotional Intelligence and Self-Control into a single explanatory framework provides a more comprehensive theoretical explanation of Problematic Social Media Use and Procrastination Behaviour among Generation Z than examining each construct independently.

Conclusion

This study examined the influence of Emotional Intelligence (EI) on Problematic Social Media Use (PSMU) and Procrastination Behaviour, as well as the mediating role of Self-Control (SC) among Generation Z in Indonesia. The findings reveal that Emotional Intelligence does not directly reduce Problematic Social Media Use but significantly reduces Procrastination Behaviour and positively influences Self-Control. Furthermore, Self-Control significantly reduces both Problematic Social Media Use and Procrastination Behaviour and mediates the relationships between Emotional Intelligence and these two behavioural outcomes, indicating that emotional competence influences adaptive behaviour primarily through enhanced self-control. This study contributes to the literature by integrating Emotional Intelligence and Self-Control into a single explanatory framework, thereby extending Self-Regulation Theory by demonstrating that self-control functions as a key psychological mechanism linking emotional competence with behavioural regulation in digital contexts. The Multi-Group Analysis (MGA) further indicates that the proposed structural relationships are consistent across male and female respondents, suggesting that the underlying psychological mechanisms operate similarly regardless of gender. These findings provide practical insights for educational institutions, counsellors, and practitioners to develop intervention programmes that simultaneously strengthen emotional regulation and self-control in order to promote healthier social media use, reduce procrastination, and enhance productivity among Generation Z.

Limitations and future directions

This study has several limitations that should be acknowledged. First, the respondents were limited to Generation Z in Indonesia and were selected using purposive sampling, so the findings may not be fully generalizable to other age groups, cultural contexts, or populations with different digital media habits. Second, this study used a cross-sectional design, which limits the ability to explain causal relationships among Emotional Intelligence, Self-Control, Problematic Social Media Use, and Procrastination Behaviour over time. Third, the data were collected through self-reported questionnaires, which may be influenced by respondents' subjective perceptions and social desirability bias.

Future research is encouraged to use larger and more diverse samples across different regions, age groups, or cultural contexts to enhance the external validity and broader applicability of the findings. Longitudinal or experimental designs may also be employed to better examine the causal mechanisms linking Emotional Intelligence, Self-Control, Problematic Social Media Use, and Procrastination Behaviour over time. In addition, future studies may incorporate other relevant

psychological and digital factors, such as fear of missing out, social anxiety, academic stress, digital literacy, or social media usage patterns, to provide a more comprehensive explanation of digital behaviour. Finally, future research could extend the present model by incorporating additional mediating or moderating variables and conducting Multi-Group Analysis across different demographic groups, cultural settings, or countries to examine whether the proposed relationships remain consistent across different populations.

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