

# Lazy, Stressed, or Just Using AI?

## Understanding Procrastination and Intelligence in Students

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### **Abstract**

*Procrastination is the voluntary but unnecessary delay of tasks despite expecting negative outcomes. It involves the habit of postponing tasks, often in favour of more enjoyable or less demanding activities. Procrastination often leads to stress, guilt, anxiety, and even lower academic performance. The constant criticism today's generation faces is about procrastinating, being lazy, and doing every single task with AI, forgetting how to function on their own. Based on recent psychological and educational research, it argues that procrastination is not simply a lack of effort. Still, it is mostly linked to perfectionism, fear of mistakes, self-control, and educational stress. Moreover since the boom of Social media, youngsters see now the perfect lives of others, raise unrealistic expectations, and also get access to information about how hard finding a job, buying a house or simply getting a loan these days that once was easily achieved it now raised the issues of disappointment in family members and so, the feeling of just giving up and in the end the loss of motivation. The growing availability of AI tools offers a new so-called solution: students can offload mental work to systems such as ChatGPT. At the same time, the risk of reducing their involvement through overreliance has emerged, making students appear negligent. This paper explores whether student procrastination is best understood as laziness, stress, or a consequence of growing dependence on artificial intelligence tools.*

**Keywords:** Procrastination, AI dependency, Self-control, Academic stress, Motivational decline, Gen Z anxiety

## Introduction

Students can be defined as individuals involved in advanced education who are in the process of acquiring knowledge, skills, and critical thinking abilities (Oxford University Press. (n.d.). Student, n.<sup>1</sup>. In Oxford English dictionary), young people who are not only aiming for strong academic results but also learning to adapt quickly to a changing digital and social world (Wu, Y., 2026). Most students now belong to Generation Z, “Gen Z” or “Zoomers,” born between 1996 and 2012, having Millennials or “Gen Y” prior to it and Generation Alpha after it (McKinsey, 2024). Generation Z grew up in a world very different from Millennials' or Generation X. Their lives are shaped by constant digital connectivity and rapid social change. Most have never known life without the internet, smartphones, or social media. This constant and strong bond between Gen Z and the digital world shapes their communication, learning processes, and self-perception (Eldridge, A., 2026). In contrast to Millennials, who witnessed the emergence of new technologies, and Generation X, who had to adapt to them, Generation Z has experienced digital interaction as a normal aspect of daily life since early childhood (Mantha & Vamsi, 2024).

At the same time, Generation Z faces increasing economic pressure. Higher costs for education, housing, and living expenses, along with economic uncertainty, make it hard to achieve financial stability (Bank of America, 2025). Many Gen Z students notice these challenges early, which affects their academic and career goals. The job market they expect to enter is also very competitive and changes quickly, so they need not only many qualifications, but also adaptability, strong digital skills, and a commitment to keep learning (Liu, et al.,2025)

Social media also has a big impact on Generation Z. Platforms like Instagram and TikTok present students with edited versions of other people’s achievements and lifestyles, frequently establishing unrealistic standards for success and productivity (Aitken, et al., 2024). Seeing this content all the time encourages social comparison, which can lead to feeling inadequate, fear of missing out, and more anxiety about performance.

It is important to consider whether what is called “laziness” is actually a reaction to a changing world formed by new technology. Understanding this connection is key to evaluating how artificial intelligence influences productivity, motivation, and procrastination among Generation Z students.

A new stereotype has emerged that labels Generation Z as “lazy” or unmotivated. However, this view does not reflect the reality of today’s world (Schwarze, et al.,2025). What some see as laziness may actually be signs of academic burnout, high stress, or new ways of working. The rise of artificial intelligence tools like ChatGPT makes things even more complex. These tools can help students work more efficiently and support their learning, but they can also make it easier to avoid tasks or not engage deeply if used as shortcuts (Vieriu, et al.,2025).

This study explores why Generation Z students procrastinate and how the rise of AI affects their daily lives. The main research question is whether students delay academic tasks mainly because they lack motivation, often seen as laziness, or because they feel stressed and

pressured. The secondary research question is whether having access to AI tools makes it easier for students to put off their work or if they use these tools to manage overwhelming tasks. The third question looks at how AI changes students' views on productivity and effort, and whether using these technologies more often leads to more procrastination or helps them work more efficiently.

## **Literature review**

The terms used to find information, such as articles, other scientific paper, or even blogs were "Gen Z", "students", "procrastination", "job market", "Gen X", "Millennials", "offloading" and the main criteria for selecting the articles was including studies in English, that focused on AI, or on Generation Z students. The number of relevant articles that were used to conduct research for this paper is 38.

Older generations like Gen X and millennials often call Gen Z students "lazy" (Zaza, 2025),(Bardolf, 2024). However, research suggests a defined line between low motivation, which shows real disengagement and procrastination, which is more about a destructive relationship between intentions and actions. In today's academic world, the boom of generative AI tools adds another factor. Today's AI can be a double edged sword, it can help by making tasks easier and supporting engagement, but it can also become a shortcut for coping with stress, poor self-regulation, and deadline pressure. Recent studies show that AI does not directly "cause laziness." Instead, students who rely more, or completely, on AI also tend to procrastinate, though it is still unclear which comes first, since most studies collect data at a single point in time and rely on participants' own reports (Uppal, et al.,2025).

### ***Defining Laziness and Procrastination***

The term "laziness" has yet to be recognised as a scientific concept. Instead, researchers often describe the term as a lack of motivation or low involvement (Inzlicht, 2024), (Heid, 2026 ). This means that a person does not see high value in a task, does not believe they can do it well or, better yet, perfect, and therefore does not try to continue it or even start it. According to another theory, the Self-determination Theory (by Edward Deci and Richard Ryan in the 1980s), the lack of motivation is completely different from simply being distracted by other things. It shows even a deeper drop in motivation, and it is most often linked to environments that reduce a person's sense of ability (Ryan, et al.,2000). Therefore, the behaviour that most call "lazy" may actually show that a person has lost motivation or just given up, rather than choosing to relax (Madsen, 2018 ).

In contrast, procrastination is defined as purposely delaying a task, important or not, even if a person knows that it might lead to negative outcomes (Steel, 2007). One of the key features of procrastination is the line between intention and action: a person plans to do something at a specific time, but cannot or simply does not want to follow it through. This phenomenon happens because people try to escape reality, feel better and relax in the said moment instead of thinking of the future and their long-term goal (Oxford University Press, Psychology Today). Research suggests that procrastination is a way of managing emotions.

People delay tasks to avoid feelings such as anxiety, fear of failure, shame, or discomfort with imperfect work. This avoidance gives short-term relief, even though it can cause problems later (Sirois, et al. 2013).

This difference is important when thinking about the use of artificial intelligence. Using AI at the last minute may look like a lack of care, but it can actually be a way to avoid stress or negative emotions, especially in situations with high pressure and expectations.

### ***Temporal Motivation theory***

Temporal Motivation Theory helps explain this pattern. According to this theory, motivation depends on expectancy, value, delay, and impulsiveness. AI can make people feel more confident about finishing tasks quickly and can make delays seem less important. AI may increase perceived expectancy (“I can do it quickly later”) and create an experience of “false time security” that makes postponement feel less risky until deadlines come closer (Steel, 2007). Motivation is defined as the product of expectancy and value, divided by the product of impulsiveness and delay (Shangareev, 2019 ). However, a study conducted in 2024 (Bok, et al., 2024) concluded that students who began studying on time had better academic results and higher grades, whereas students who procrastinated, studied at the last minute and delayed academic tasks right before the deadlines had a lower grade score. Additionally, the study also shows that the earlier the academic anxiety formed, the more it was useful and helpful, leading to better study outcomes, while the stress that was caused by last-minute work was proven to be destructive.

Overall, Temporal motivation theory describes motivation in relation to time pressure (Steel et al., 2018) and helps examine AI use, which may reshape students' time allocation, stress, and behaviour patterns (Beatrix, 2025).

### ***Evidence on AI dependence and academic procrastination in students***

AI overreliance happens when students use AI tools as their main way to complete assignments, find information, and solve problems, not just for extra help (Passi, et al.,2022). Researchers see this as a real educational and psychological issue, not just a convenient and easy way to get rid of tasks quickly (Passi, et al.,2022), (Abubakar, et al.,2025), (Zhang, et al., 2024 ) (Chardonnens, 2025). A 2024 study of 300 university students revealed that academic stress and performance expectations were the principal causes of AI dependency, and that students under pressure are more likely to use AI as a bad habit that has even worse results in critical thinking (Zhang, et al., 2024). This is important since procrastination is already known to be a common reality in schools (Brignardello, et al. 2023). It was proven that up to 70% of college students call themselves procrastinators, and meta-analyses show procrastination is linked to lower academic performance (Bok, et al., 2024). In short, procrastination is already a major problem, and AI can add to this problem.

Recent studies provide evidence of a connection between AI overreliance and procrastination. For instance, research on AI dependency in academic settings shows that factors such as academic stress and performance expectations are a direct route to increased

reliance on AI tools (Márquez, et al., 2025). A 2025 study of 1,308 nursing students found that 82.0% recognized that academic procrastination had a strong connection with stress (Cao, et al., 2025). According to this study, both good and bad emotions were found to mediate the connection between stress and procrastination among nursing students, suggesting that students may delay work as a means of coping with their stress rather than out of carelessness. According to Cao et al., AI can be appealing to students because it provides immediate answers, quick summaries, and ready-made content, which may temporarily reduce discomfort.

However, this can lead to a “false sense of time security.” Students who believe that they can use AI in order to finish an assignment quickly feel that they can safely start later, since they believe that AI can solve their tasks quickly. This misleading sense of time was explained by “performance expectations”, meaning that the moment when students believe AI will save effort, they are more likely to become dependent on it (Zhang, et al., 2024). Although this overuse of AI leads to laziness and procrastination, students who possess advanced digital competence are more likely to experience a boost in academic confidence and successfully decrease procrastination (Márquez, et al., 2025). This suggests that, rather than making procrastination easier to justify, increased digital skills can help students better manage their time, consequently reducing academic delays.

One important tool used to measure AI dependence in education is the SAID questionnaire, which evaluates just how much students rely on artificial intelligence in their academic life (Castro, et al., 2025). In a sample of 370 secondary school students, the authors assess three key aspects of AI dependence: trust in AI, informational exclusivity with AI, and AI literacy. Trust in AI refers to how much students rely on AI, informational exclusivity describes the tendency to depend mainly on AI rather than other sources, and AI literacy is the ability to understand and evaluate generated information. The strongest dimension belonged to informational exclusivity ( $\omega = 0.81$ ), showing that many students rely heavily on AI for school work. In second place was AI literacy ( $\omega = 0.72$ ) and third was trust in AI ( $\omega = 0.71$ ), therefore all three aspects are reliable. The study also points out that this type of dependence can reduce critical thinking and independent learning skills.

In summary, recent studies demonstrate that AI dependency is closely related to factors that contribute to academic procrastination, especially stress and the expectation that technology will reduce time and effort. Therefore, AI should be used as a helping tool rather than a means to avoid school challenges. Abusive reliance on AI may increase efficiency but can interfere severely with discipline and critical thinking.

### ***Cognitive offloading and cognitive impacts of AI reliance***

Cognitive offloading refers to the process of using external tools or resources in order to reduce the mental effort required for cognitive tasks such as learning and remembering. People prefer to focus their workload on elements in their environment. This refers to writing notes in distinct colours, making reminders or recently, relying on digitalisation, which includes smartphones or AI tools (Risko, et al., 2016).

An issue arises with the “Google effect”, or as some call it, the “digital amnesia” (Sparrow et al., 2011). It is the situation where people tend to forget facts that are easily found on search engines such as Google or Chrome (Sparrow et al., 2011), (Gong, et al.,2024). The problem is that people choose not to remember information that can be searched repeatedly, a click away. Moreover, this does not happen only to information that can be searched on Google but it also occurs with everything digital, such as phone numbers that can be found in the phone's memory or even addresses (Gong, et al.,2024).

Now, with the rise of AI, cognitive offloading has intensified and grown from being just simple help to becoming deeply integrated into the way individuals think, learn, and solve problems. While people traditionally relied on tools such as notes and reminders (Risko, et al., 2016 ), AI systems now allow users to expand not only their memory capacity but also their reasoning. Research shows that this change can significantly diminish the mental effort required to complete tedious tasks, sadly leading to the overuse of AI rather than cognitive processes.

This rising reliance on AI may have significant cognitive consequences. Research shows that when individuals regularly offload complex thinking to AI, they tend to absorb less information, which can weaken understanding (Jose,et al.,2025). This issue is mostly met in learning settings, where students more frequently turn to AI tools to complete tasks more efficiently, sometimes to the disadvantage of not developing critical thinking skills (Gerlich, 2025). Gradually, this “outsourcing of the mind” may change how people think, making them more efficient, but potentially less cognitively independent (Richmond et al., 2025).

Therefore, when it comes to AI, cognitive offloading is no longer only about convenience but also requires carefully assessing the benefits of reduced mental effort and the risks of diminished engagement, particularly among students who may already struggle with procrastination and motivation (Gerlich, 2025).

## **Methodology**

Over the years, artificial intelligence has become a key component in students' academic activities. This study is based on a mixed-methods approach, combining quantitative and qualitative research techniques, aiming to explore the relationship between procrastination and the use of artificial intelligence, focusing mainly on Gen Z, allowing us to better understand the relationship between AI use, productivity, motivation, and procrastination, to answer the Research Questions of the paper.

The data was collected through two questionnaires that were disseminated in March, 2026 to two main groups: students (Gen Z) and non-students (from different generations, mostly Millennials and Gen X), aiming to enable a comparative analysis. The survey instruments used included both closed and open-ended elements, and were set to measure the frequency of AI, as well as the productivity, motivation and learning. This combination of methods allows for both statistical analysis of trends and deeper interpretation of participant perspectives.

The questionnaires were distributed online to a convenience sample, meaning that participants were selected based on their easy accessibility. This sample was chosen due to accessibility and time constraints, limitations of the current study, leading to a quick data collection from the inner community. All participants answered this questionnaire voluntarily and the responses were collected anonymously to protect their privacy and also to collect honest answers.

The collected data was analysed by using a comparative and descriptive approach, based on the answers that we extracted from the survey. Initially, the results were exported into Excel files and analysed question by question. For closed-ended questions (procrastination frequency, productivity, AI use, etc.), answers were grouped into standardised categories as “Occasionally”, “Daily”, and so on. For multiple choice questions, the count was made individually, since participants could select more than one option, the frequencies used were calculated based on the count number of each option. For open-ended questions, the answers were interpreted and set into categories (AI is helpful, AI is harmful, etc), afterwards these were quantified by counting how many answers we got for each category.

Finally, a comparative analysis was conducted by separating participants into groups based on demographic factors (age and educational/professional status). All calculations were completed by using simple frequency counts and distributions, allowing the reproduction of this analysis.

## **Results and discussions**

This study aimed to explore the relation between procrastination and the use of artificial intelligence among different groups, as previously mentioned. The results indicate that AI plays a significant role in productivity, resulting in a helpful tool as well as a source of distraction, leading to procrastination.

The age reference for the first survey was mainly undergraduate students between 19 and 22 years old (97.4%), indicating that the results mainly reflect the experiences of Gen Z university-age students, while for the second survey, the participants were mainly full-time employees aged between 36 and 60 (90.5%). These two surveys allow for a direct comparison between students, we got 38 answers, and working adults, we got 42 answers. This comparison also provides context for Research Question 2, as differences in AI usage between groups help represent how access to AI may influence task management and potential procrastination behaviours.

We notice that students use AI very frequently, 28.9% use it daily, another 36.8% are using it a few times per week, and 65.7% are regular users. In contrast, adults reported lower engagement, with only 11.9% using AI daily, 35.7% using it a few times per week, while 47.6% reported occasional or rare use and 4.8% never use AI. This suggests that AI is more deeply integrated into students’ routines, likely due to its direct applicability to academic tasks, as seen in Figure 1. In reference to Research Question 2, this indicates that frequent AI

use among students increases its potential to both support task completion and contribute to delaying behaviours, depending on how it is used.

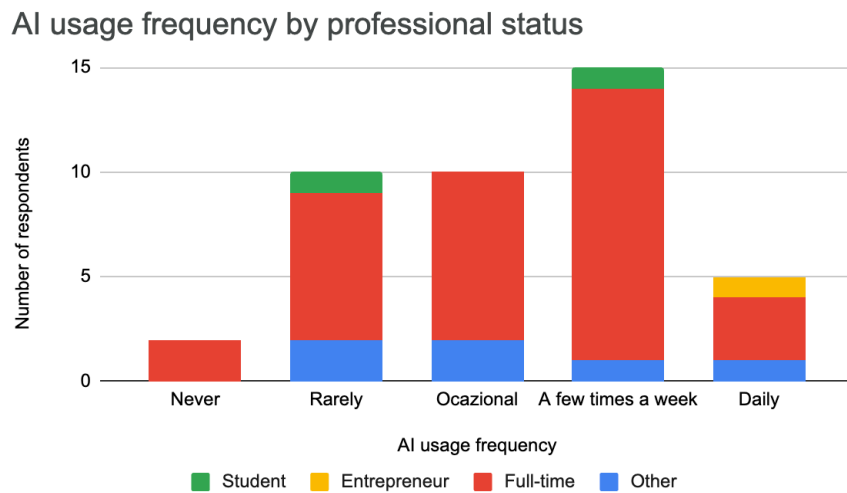


Figure 1. AI usage frequency by professional status Source: Authors’ own research results

Figure 1 shows the usage frequency of AI by professional status for people over the age of 35. The chart shows that full-time employees use AI a few times per week, with fewer reporting daily use or no use at all. Occasional and rare usage are also predominant, indicating that AI is mostly used as a situational tool rather than a continuously integrated resource among Gen X and Gen Y.

Students mainly use AI for academic-related activities, 84.2% using it for studying and explanations, 63.2% for homework help, 42.1% for brainstorming ideas, 39.5% for writing essays, with a few of them using it for entertainment or coding. These patterns also vary depending on the level of education and academic tasks, showing differences in how AI supports learning across contexts. The results are presented in Figure 2.

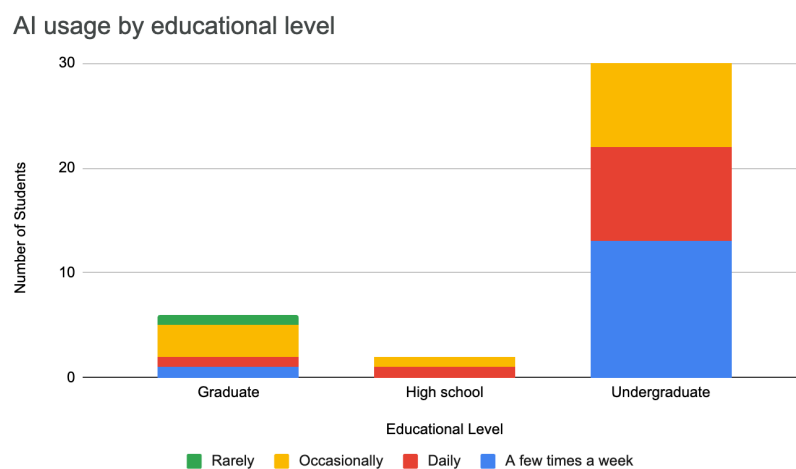


Figure 2. AI usage by Educational Level Source: Authors’ own research results

Figure 2 shows the impact that AI has over the students at different education level for Gen Z. The chart shows that undergraduate students present the highest use of AI, particularly in weekly and daily categories, while graduate students have a more moderate and evenly distributed usage. High school students show limited use overall, suggesting that AI use increases with academic level and workload demands.

On the other hand, adults primarily use AI for functional purposes such as writing, organising, and searching for information. Specifically, 69.0% reported using AI for learning or information, while 28.6% use it for writing tasks and a similar 28.6% for work-related activities. Additionally, 21.4% reported using AI for planning and organisation. These results indicate that AI use among adults is more focused on work tasks, with lower overall usage compared to students.

When it comes to productivity, students had mixed opinions. Looking at the data, 60.5% stated that AI improves their productivity, 21.1% said that it actually makes them less productive and 18.4% noticed no significant change, as presented in Figure 3. Meanwhile, the survey for adults indicates that reliance on AI remains generally moderate. Specifically, 40.5% of respondents reported moderate reliance, while 38.1% indicated low reliance and 16.7% reported no reliance at all. Only a small proportion, 4.8%, reported a high level of dependence on AI. These results address Research Question 3, suggesting that AI is generally perceived as an enhancing tool for productivity, particularly among students, although its effects are not universally positive.

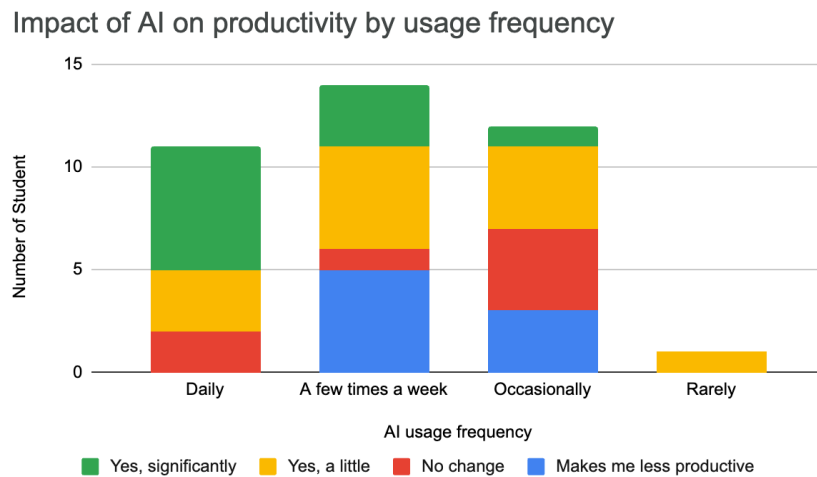


Figure 3. Impact of AI on Productivity by Usage Frequency Source: Authors’ own research results

Figure 3 shows the impact that AI has over the productivity of Gen Z. The chart shows that more frequent AI use, daily and a few times per week, is associated with higher perceived productivity, with most users reporting positive effects. In contrast, occasional users display more mixed outcomes, including no change or decreased productivity, while rare users report minimal impact.

Procrastination is significantly more frequent among students, 42.1% reported that they often procrastinate and 26.3% always procrastinate, meaning that nearly 70% experience frequent procrastination, while the remaining 31.6% report occasional procrastination, compared to adults, who show rare or occasional procrastination. The underlying causes of procrastination also differ between groups. Among students, procrastination is primarily driven by lack of motivation, 89.5%, followed by social media, 63.2%, boredom, 55.3%, and task difficulty, 36.8%, suggesting strong emotional and attentional influences. In contrast, adults are more influenced by stress and workload, lack of time, and to a lesser extent digital distractions, indicating that procrastination in this group is more context-dependent rather than motivation-driven. The results are presented in Figure 4. These findings directly respond to Research Question 1, showing that procrastination is more strongly linked to stress, workload, and emotional factors rather than simply a lack of motivation or laziness.

Reasons for procrastination by professional status

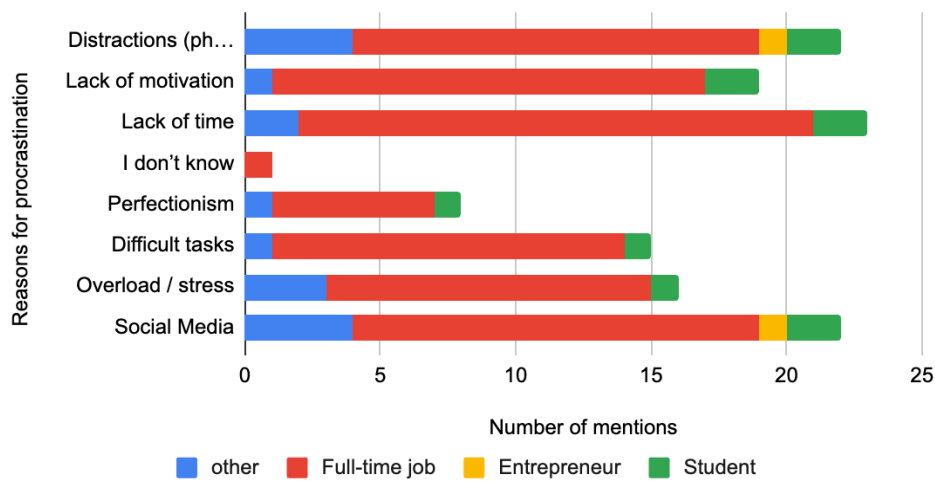


Figure 4. Reasons for procrastination by Professional Status Source: Authors' own research results

Figure 4 shows the Reasons for procrastination by professional status for people over the age of 35. The chart shows that lack of time, workload/stress, and lack of motivation are the most frequently reported causes of procrastination, particularly among full-time employees. Distractions and social media also contribute across groups, while factors such as perfectionism and difficult tasks are mentioned less frequently. Overall, the findings suggest that procrastination in this group is primarily driven by contextual and work-related pressures rather than motivational deficits alone.

In addition, the relationship between AI usage and procrastination among students appears to be dependent on other factors rather than being direct. When asked whether AI increases procrastination, only 26.3% agreed, while 31.6% disagreed and 42.1% were uncertain. At the same time, 65.8% of students stated that AI makes people “lazier” depending on how it is used, rather than directly causing laziness.

Among students, 50.0% self-identify as “lazy” when studying and 47.4% report this applies sometimes, and only 2.6% do not consider themselves lazy. These findings indicate that negative self-perception is highly seen in students, although it may not necessarily reflect their behaviour, but rather generate motivational challenges. Adults report more moderate to high motivation compared to students who experience lower motivation overall. In contrast, adults’ perception of Generation Z is different. Based on open-ended qualitative responses, adult participants describe them as lazy (~22%), while others highlight that they work differently, rather than being simply less motivated (~36%). The rest expressed neutral responses, highlighting positive and negative views on Gen Z as a lazy generation. Similarly, based on qualitative questions, most students do not describe their generation as lazy, but instead describe differences in working style. In connection with Research Question 1, this suggests that “laziness” is often a matter of perception rather than actual behaviour, reinforcing the idea that procrastination is more complex and linked to psychological and contextual factors.

When examining the impact of AI on laziness, the results highlight a new perspective. Among students, 26.3% believe that AI makes students lazier, 65.8% state that this depends on how AI is used, and only 7.9% disagree with this statement. These results contribute to Research Question 3, indicating that AI reshapes how students perceive effort, as its impact on laziness depends on usage rather than being a direct cause of reduced motivation, as seen in Figure 5.

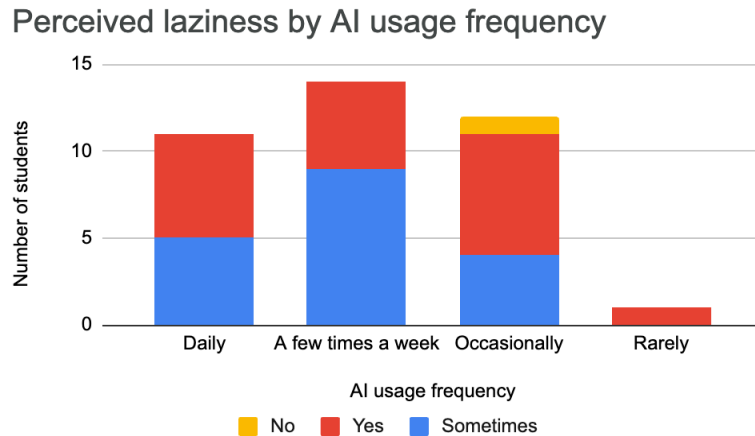


Figure 5. Perceived Laziness by AI Usage Frequency Source: Authors’ own research results

Figure 5 shows the relation between the usage of AI and the perception of laziness for Gen Z. The chart shows that most students, regardless of how often they use AI, report that it can lead to laziness either sometimes or yes, with very few indicating no effect- Source: Authors’ own research results/contribution.

Students and adults believe that the impact of AI can change depending on how it is used. Students seem a bit more positive and confident about this, while adults seem less prepared and less confident about these changes. Meanwhile, while looking at the future

effects, students have different opinions about them, while adults seem way more pessimistic. The main concerns mentioned during the survey were the increased dependency on AI, the reduction of critical thinking, lower motivation and more superficial learning.

In conclusion, these results show that AI can be both beneficial and unproductive, depending on how the people use it, and under what circumstances. The use of artificial intelligence should be conscious and balanced, as well as any other technologies available. Overall, the results from this study provide clear answers to all three research questions: procrastination is primarily driven by stress rather than laziness, AI does not directly cause procrastination but can influence it depending on usage, and AI reshapes students' perceptions of productivity and effort by emphasising efficiency over traditional work processes.

## ***Conclusion***

In closing, the findings of this study provide evidence in relation with the proposed research questions. Firstly, student procrastination is not mainly caused by a lack of motivation or laziness. Instead, it is highly connected to academic stress, job market pressure, and psychological factors such as fear of failure and anxiety. This shows that what is repeatedly perceived as laziness is, in many cases, a reaction to overwhelming tasks rather than a refusal to engage.

Secondly, the results indicate that the availability of artificial intelligence does make it easier for students to delay their work. However, it proves that AI tools are not simply used to avoid tasks. Many students rely on AI as a way to manage overwhelming tasks and reduce stress, using it as a coping mechanism when facing fast approaching deadlines and academic pressure. Therefore, AI does not directly cause procrastination but rather supports student behaviours that already exist.

Thirdly, artificial intelligence clearly changes how students see and understand productivity and effort. While constant use of AI can push forward procrastination by creating a false sense of time security, it can also improve efficiency and help students complete tasks more quickly when used appropriately. This dual effect explains why AI is seen both as a helpful academic tool and as a harmful tool for reducing critical thinking.

To conclude, student behaviour should not be characterised as lazy. It is better understood as a stress-coping mechanism that is encouraged by the convenience of AI tools. At the same time, this does not mean that student involvement is only going to decline. By introducing more interactive and fun learning methods, teachers and professors can capture students' attention and encourage active participation. In this way, technology can be used not only to simplify tasks, but also to support a deeper level of understanding and learning and restore students' excitement in their academic life.

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