



Research Article

Exploring success in higher education in Japan: Students' perceptions of successful peers and the meaning of success

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While many studies have investigated academic success, few have explored its psychological and social dimensions beyond straight forward numerical measures. Research seems to mostly focus on specific student groups within a Western context, often overlooking diverse perspectives, particularly those in STEM fields and in non-Western settings. This study explores how students in Japanese universities perceive success alongside the personality traits they associate with successful peers. Semi-structured interviews were conducted with ten Life Sciences students employing a qualitative approach incorporating both deductive and inductive thematic analysis. The findings support previous research on personality, highlighting *Conscientiousness*, *Agreeableness*, and *Openness to Experience* as being the key traits of successful peers. Additionally, they reveal participants prioritize self-discovery, personal growth, and fulfillment over traditional academic metrics such as GPA. Furthermore, the findings indicate significant differences in students' perceptions of success compared to those in existing literature, suggesting that cultural context, life stages, and field of study, among other factors, shape these views. These insights support learner autonomy and academic advising through emphasizing the importance of culturally inclusive perspectives on success.

Keywords: Academic success, personality traits, semi-structured interviews, STEM education, university students

1. Introduction

Although numerous quantitative studies have examined academic success using traditional indicators such as grade point averages (Gray & Watson, 2002; Hazrati-Viaria et al., 2012), exam scores (Chamorro-Premuzic & Furnham, 2003; Conard, 2006; Furnham & Chamorro-Premuzic, 2004), and self-evaluations (Noftle & Robins, 2007; Wang et al., 2023), relatively few have explored how students themselves interpret the concept of success. These studies have made valuable contributions by identifying measurable predictors of performance. However, they often place less emphasis on the psychological, social, and cultural dimensions that may also shape students' experiences in meaningful ways.

In response, a growing number of qualitative studies have begun to examine success from the perspectives of students, highlighting factors such as personal growth, resilience, emotional satisfaction, and recognition from family or community. These investigations provide a broader lens on what it means to succeed in higher education. Nevertheless, many of these studies focus on specific populations, such as students in the social sciences, first-generation college students, or high-achieving individuals, and are often situated within Western contexts. Consequently, the experiences of students in STEM fields and in non-Western settings remain relatively underexplored.

This limitation highlights the importance of considering how definitions of success may be influenced by factors such as culture, academic discipline, and life stage. Understanding how students interpret success within their own educational and social contexts can offer a more comprehensive and inclusive view of their academic journeys.

The present study contributes to this ongoing conversation by examining how undergraduate students in Japan, enrolled in a STEM program, conceptualize academic success. It also explores the personality traits they associate with peers they perceive as successful. Using a qualitative approach that combines semi-structured interviews with both deductive and inductive thematic analysis, this research offers insights that contribute to the field of learner advising and autonomy, which focuses on understanding learners' individual differences, including their goals, motivations, beliefs, and values.

2. Literature Review

Rowntree et al. (2016) investigated perceptions of academic success among English as an Additional Language [EAL] students at an Australian university. They found that success, across diverse backgrounds, centered on academic achievement, career goals, and familial or community impact. In particular, African-born students felt a strong commitment to improving their communities back home; indeed, success was also associated with earning recognition from family and communities in their home countries. A particular instance is that of students who were parents where success meant becoming positive role models in the hope of inspiring their children to pursue and complete their own education. Rowntree et al. concluded that EAL students often associated success with relational and communal goals rather than with individual achievement alone.

Cachia et al. (2018) examined psychology undergraduates' views on success and the pathways to achieving it at a university in London. The study revealed that "success" was generally perceived as a combination of personal growth and the attainment of qualifications that would both build students' knowledge and their employability. The study also identified intrinsic and extrinsic factors influencing academic success. Intrinsic factors included self-management, taking responsibility for learning, handling setbacks, and being aware of one's strengths, motivation; interest in the subject, eagerness to learn, and goal-setting, and personal skills, professionalism, communication, and time management. Extrinsic factors included the quality of teaching provision, resources, staff availability, and feedback and available support, from family, roommates, classmates, and other social groups. The study emphasized the interconnectivity of intrinsic and extrinsic factors and their being essential for academic success. It further provided a fresh view of academic success from the student's perspective and the contributing factors influencing such success. O'Shea and Delahunty (2018) investigated how first-generation undergraduate students, across five Australian universities, reflected on academic success. The authors focused on exploring this cohort of students to understand the additional challenges and complexity of their respective journeys through university. The researchers identified three main views of success: The first is *success as a form of validation*, referred to the recognition and feedback students received from others, particularly faculty members. The second is *success as defying the odds* referred to the ability to persist despite personal and academic challenges, in effect, resilience. The third view, *Embodied and emotional success*, was described as the happiness and satisfaction students derived from pursuing their goals. The study's findings broaden the understanding of success, suggesting that it encompasses more than good grades, passing exams, or obtaining a job post-graduation. Instead, success was found to involve personal growth, career achievement, and the application of university-acquired skills and knowledge in society.

More recently, Acar (2023) investigated high-achieving students' views on what contributes to academic success at a university in Turkey. The study found five key factors influencing academic success; namely Responsibility, Motivation, Support, Academic Skills, and Social Skills. Responsibility, here, refers to the students' commitment to meeting their parents' expectations and making them proud and happy. This sense of responsibility towards family emerged as a significant motivation to excel academically. The students' motivation was also driven by aspirations to build a professional reputation and thereby gain status. Support in the form of financial, emotional, or academic assistance from teachers, friends, parents, and close relatives played a crucial role in students' success. Acar (2023) also found that successful students

demonstrated a keen awareness of their own academic skills, including recognizing their strengths, weaknesses, and interests. This self-awareness enabled the students to develop effective study plans, focus their listening, and develop strategies to overcome academic challenges. Finally, social skills were deemed essential for adapting to new circumstances and the university environment as a whole. These students were found to be selective in choosing meaningful friendships and tasks, while prioritizing positive relationships with their families, teachers, and peers. The authors argued that internal factors (Responsibility, Motivation, Academic Skills, and Social Skills) had a more significant influence on the academic success of the study participants than did external factors such as support from others.

Overall, the four studies detailed above provide varied yet interconnected perspectives on success in higher education. Rowntree et al. (2016) established that success is associated with high academic performance, career fulfillment, and accrued benefits to family and community; emphasizing collective goals over individual achievements. Cachia et al. (2018) described success as personal growth and the acquisition of qualifications that enhance employability. O'Shea and Delahunty (2018) noted that success also includes external validation, resilience, and personal fulfillment. Lastly, Acar (2023) identified that success encompasses responsibility, motivation, and both academic and social skills, with a strong emphasis on meeting familial expectations. Taken together, these studies indicate that academic success extends beyond mere GPA scores, grades and qualifications; it encompasses personal development, societal impact, and relational recognition.

Despite the valuable insights offered by these studies, they also expose certain gaps and limitations that future research could address. The studies focus on specific groups such as EAL students, first-generation college students, or high-GPA achievers and fields of study, such as psychology and social work, without adequately representing the experiences of a wider student population, including those in STEM fields and non-traditional education. Additionally, three of the four studies were conducted in a western context (Australia and the UK), with only one study located in a non-Western setting (Turkey). As a consequence, the definitions of success may reflect predominantly Western or urban-centric perspectives, potentially neglecting non-Western viewpoints. These limitations call for further research in other global contexts to capture diverse culturally specific and as yet unrepresented perspectives of academic success.

The present study contributes to existing research by exploring how university students enrolled in a STEM program at a university in Asia perceive academic success. Additionally, it examines students' views on the personality traits of their successful peers.

3. Method

3.1. Research Design

This study took place at a private university formerly located in Gunma Prefecture, Japan. The institution offered a unique educational setting for exploring academic success being, as it was, a private STEM institution in Asia, a context underrepresented in previous research.

A qualitative research design was used to examine how students in the Life Sciences Department understand academic success and how they perceive the personality traits of successful peers. The study was guided by two research questions:

RQ 1) What does success mean to students within the context of university?

RQ 2) How do university students perceive successful peers?

The interviews were transcribed and translated into English using AI-supported tools, and the translations were reviewed by a proficient bilingual speaker. The transcripts were then coded and analyzed using both inductive and deductive thematic analysis methods. To reduce individual bias and strengthen consistency, the researchers first analyzed the transcripts independently and then engaged in discussions to reach consensus.

3.2. Participants

A total of ten university students from the Life Sciences Department participated in the study; six female and four male, ranging in age from 18 to 24, with two being graduate students. Table 1 presents the participants' nicknames and demographics, ordered by academic year.

Table 1

Demographics of the ten participants (Sorted by Academic Year)

No.	Nickname	Gender	Academic year	Country of birth
1	Student-A	Male	1 st year UG program	Japan
2	Student-B	Female	1 st year UG program	Japan
3	Student-C	Female	2 nd year UG program	Japan
4	Student-G	Male	2 nd year UG program	Japan
5	Student-J	Female	2 nd year UG program	Japan
6	Student-F	Female	3 rd year UG program	Japan
7	Student-H	Female	3 rd year UG program	Japan
8	Student-I	Male	4 th year UG program	Japan
9	Student-D	Male	NS year Graduate program	Japan
10	Student-E	Female	NS year Graduate program	Japan

Note. UG: Undergraduate program; NS: Not Stated as the Graduate students did not furnish their respective academic years during their interviews.

3.3. Data Collection

Interviews with participants were arranged via email and conducted online using Google Meet. They followed a semi-structured format and lasted, on average, 30 minutes. To ensure a comfortable environment and minimize foreign language anxiety, all interviews were conducted in Japanese, the participants' native language.

During the interviews, participants shared their own perceptions of academic success within the university setting. They further identified a peer they considered successful in university, assigned them a nickname, and described their personality traits, behaviors, and defining characteristics. Additionally, they discussed challenges they had faced as university students themselves and the strategies they used, if any, to overcome them.

At the conclusion of the interviews, each participant received a 500-yen gift card as a token of appreciation for their time and contribution. Aside from minor internet connection issues, no significant difficulties or participant withdrawals occurred before or during the interviews.

3.4. Ethical Procedures

Prior to data collection, the corresponding author obtained approval from the Humanities and Social Sciences Research Ethics Committee (Approval number 2023-003) at Toyo University. Participants were recruited through a combination of internal advertising and email; an initial invitation with a brief study description was posted on the university's learning management system and emailed to potential candidates. Students accepting the invitation received detailed information on the research and asked to provide consent for interview recordings. All participants were assured that their data would be used solely for research purposes and that their identities and personal information would remain confidential and protected.

3.5. Data Analysis

Each interview was transcribed using the AI-supported transcription software Notta. The transcripts were then reviewed against the original recordings to ensure completeness and accuracy. They were then translated into English using two AI-assisted translation tools, DeepL and GPT-4.0 and a proficient bilingual speaker compared and reviewed the translations for accuracy. Finally, the transcripts were analyzed using the thematic analysis method, with the qualitative analysis software ATLAS.ti employed to code each interview.

To address the research questions, the interview transcripts were analyzed using two complementary approaches: *Inductive* and *Deductive thematic analysis*.

3.5.1. Inductive thematic analysis

This method was employed to explore students' perceptions of academic success without predefined categories. Three researchers independently analyzed the data, each conducting multiple readings of the transcripts to develop an initial understanding of students' perspectives before engaging in collaborative discussions. During this initial round of analysis, three overarching themes emerged: *Self*, *People*, and *Environment*. The *Self* theme encompassed aspects such as fulfillment, referring to satisfaction with university life; growth, relating to skill and knowledge development; and awareness, involving career exploration. The *People* theme included balance, denoting the management of academic and personal life; engagement, describing active participation in learning; and network, highlighting the importance of building connections. The *Environment* theme covered extracurricular involvement through clubs and activities, part-time work and volunteering experiences, and the application of skills in real-world contexts.

After identifying these broad categories, the researchers independently coded the data according to this thematic framework. They subsequently reconvened to compare and refine the codes and themes. Any discrepancies in their analyses were discussed until a consensus was reached, ensuring consistency and credibility in interpretation across the dataset. As a result of these discussions, five key subthemes were retained due to their prominence in the data: *Self* (Awareness, Growth, and Fulfillment), *People* (Academic Work-Life Balance), and *Environment* (Real-World Application of Skills).

3.5.2. Deductive thematic analysis

This approach was employed to examine the personality traits associated with successful peers, drawing on the Five-Factor Model of Personality developed by Costa and McCrae (1992). The model, in its simplified form, encompasses five broad personality dimensions: openness, conscientiousness, extraversion, agreeableness, and neuroticism.

Openness characterizes individuals who are imaginative, curious, and receptive to new experiences. Such individuals tend to explore unconventional ideas and approaches, demonstrating creativity and innovation in their actions. *Conscientiousness* refers to individuals who are organized, disciplined, and goal-oriented. They value planning and perseverance, effectively managing their responsibilities to achieve desired outcomes. *Extraversion* describes sociable, energetic, and assertive individuals who thrive in social settings, enjoy interpersonal interactions, and seek stimulation through dynamic environments. *Agreeableness* is associated with compassion, cooperation, and empathy; individuals high in this trait prioritize harmonious relationships, demonstrate trust and support, and work effectively in collaborative contexts. Finally, *Neuroticism* pertains to individuals who are more prone to experiencing negative emotions such as anxiety and self-doubt. These individuals often struggle with stress and emotional instability, making them more sensitive to challenges and fluctuations in their environment.

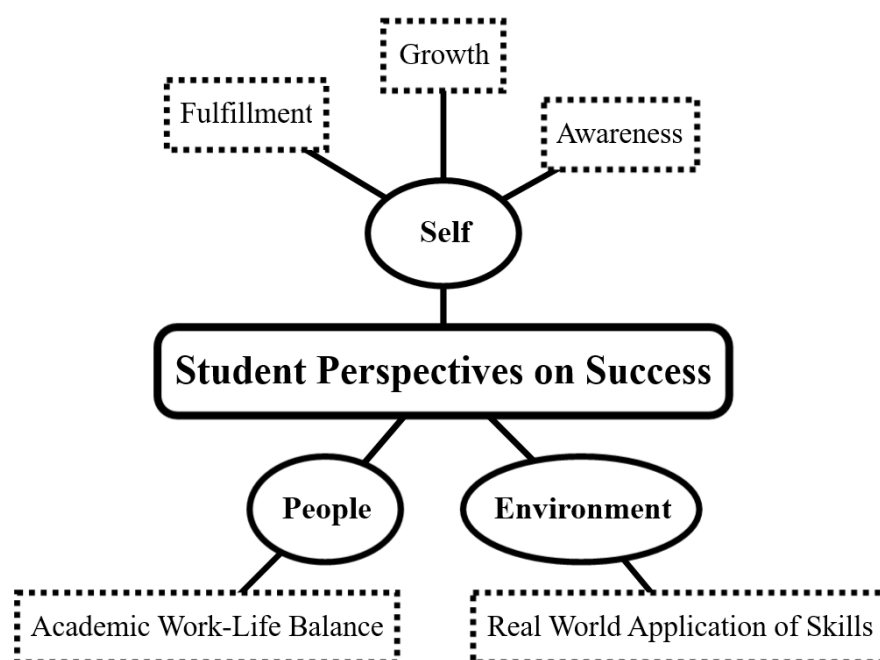
4. Findings

4.1. Students' Perspectives on the Meaning of Success

Figure 1 presents a visual summary of the main findings discussed in this section. To address the first research question, the participants were asked to share their own views on what success meant to them in the context of college or university. They were also asked to share some of the challenges they themselves had faced as university students and what it took to overcome them.

Figure 1

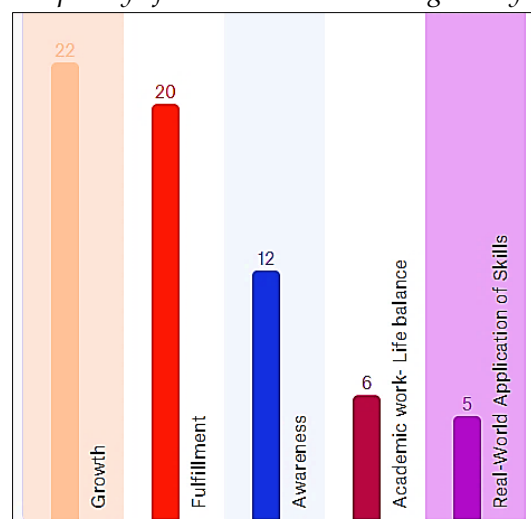
Visual Representation of Students' Perspectives of Success in University



The results of the coding analysis revealed three main themes and five subthemes: *Self*, *People*, and *Environment*. The *Self* theme encompassed the subthemes of awareness, growth, and fulfillment; the *People* theme focused on academic work-life balance; and the *Environment* theme reflected the real-world application of skills. Figure 2 below illustrates the frequency of each subtheme code.

Figure 2

Frequency of Sub-Themes in Coding Analysis Results



4.1.1. Self

Awareness. This theme refers to the exploration and discovery of fields or areas of interest that could lead to a re-evaluation or diversification of a student's career path by the time of graduation. For example, Student A shared that he viewed university as a time "to gain experiences before heading into the job market," which motivated him to try a variety of things whilst a student. Similarly, Student F considered that "taking full advantage of being in university," through discussing questions with friends after class or emailing professors, deepened her understanding and

improved her academic performance. She believed that *"trying things out often leads to success"* despite having yet to decide on a career path.

Student E shared similar comments as she reflected on her experience as a life sciences major. She alleged that *"not everyone ends up in a career related to biology,"* and thus, she believed students should pursue a broad range of experiences to help them on deciding a future career path. Students B and D revealed experiences supporting this idea.

Student B initially aspired to conduct research but then decided on pursuit of a teaching certification as she worried about job prospects. During her time, she gained a deeper appreciation of the teaching profession and felt it to be *"like a step in the right direction."* She further remarked that if becoming a researcher proved to be too difficult, she would probably opt to become a teacher. Conversely, student D, now a graduate student, initially aimed to become a teacher when he entered university, however, after completing a teaching internship, he changed his mind and decided to pursue a different career path. He recalled, *"That was a difficult moment for me,"* but he sought advice from several people, including seniors, friends who were also aspiring teachers, and professors, before making his final decision.

The comments from these five students highlight the importance of making the most of university life by embracing and expanding personal experiences, exploring new opportunities, and reflecting on various possible career paths before graduation.

Growth. This perspective on success emphasizes changes in thinking, attitudes, and personality alongside the development of new skills and knowledge. Student D remarked, *"Success is realizing how much you've changed from when you first entered university until graduation. That growth, in itself, is success to me."* She elaborated that she had become more conscious of conducting herself professionally, particularly after deciding to pursue a teaching career, contrasting this with her less mature outlook when she first entered university.

Student A shared a similar perspective, reflecting on his transformation during university. He noted that in high school, he was *"an indoor person"* who avoided challenges and struggled to accept differing viewpoints. In contrast, he actively embraced new experiences at university and learned to value diverse perspectives in seminar discussions. This shift helped him appreciate the importance of understanding and respecting other people's views.

Other students also reflected on their personal growth. Student B described how participating in a teaching certification program broadened her perspective, particularly by allowing her to compare her past role as a student with her evolving role as a teacher. Student C observed that adopting formal language and polite manners had been invaluable when interacting with professors and communicating via email. Similarly, Student E mentioned becoming more mindful about managing his responsibilities, while Student H emphasized the importance of developing communication skills and teamwork.

The reflections above illustrate that success in university involves growth in multiple dimensions, including adopting professional attitudes and embracing diverse perspectives. Additionally, it involves developing practical 'soft skills' such as communication, teamwork, and managing responsibilities. These changes represent some important transformations that students undergo before graduation.

Fulfillment. Fulfillment refers to a deep sense of satisfaction across various aspects of life whilst in university, including academic, emotional, and social dimensions. Many students emphasize that success in university is intertwined with activities that bring enjoyment and fulfillment, such as forming lasting friendships, participating in clubs, and engaging in the broader campus experience. Student A, encompassed this idea in the following comments: *"Success means having experiences during your university life that make you feel glad you became a university student."* Student D supported this, saying: *"If you're having fun and enjoying those experiences, I think that's what success looks like."* Student F commented, *"Success is about feeling like it was worthwhile to go to university."* Finally, Student H said that success included *"living a fulfilling life both at university and personally"*, meaning making the most of your time inside and outside of university.

Additionally, the participants added that studying subjects aligned with personal interests was a further source of fulfillment. As Student I pointed out, *"One aspect is that before entering society, students can study what they truly want. For many, this can be the last opportunity to do so."* The same student suggested that people who study what they are passionate about tend to feel more successful. Student E echoed this sentiment, noting, *"Success comes if you're pursuing something you're passionate about."*

Academic performance, it appears, also contributes to the feeling of fulfillment. Student G reflected, *"Yes. For me, I've been working hard on my studies, and when I see my grades, I feel a sense of accomplishment."* This sense of fulfillment can also emerge from witnessing tangible progress in one's work. Student J, who worked as a part-time teacher for more than a year, shared, *"Seeing the progress of my teaching makes me feel very happy."* Finally, Student H believed that the feeling of fulfillment goes beyond university life. She noted, *"I think a successful university student is someone who can get a job they really enjoy."*

Fulfillment, therefore, encompasses both personal and academic satisfaction. Engaging in experiences that bring joy, such as forming friendships and participating in club activities, becomes part of being successful. Pursuing personal passions in studies and the feeling of accomplishment after seeing their progress and the fruits of their labor also plays a key role in a student's academic success.

4.1.2. People

Academic work-life balance. This concept refers to effectively balancing academic responsibilities, co-curricular and extracurricular activities, and social commitments with personal life and relationships. It also involves the utilization of free time productively for personal growth and meaningful pursuits.

Three participants—Students B, G, and F—expressed similar views on success in university, emphasizing the importance of maintaining a balance between academic and personal life. This perspective emerged as they reflected on respective successful peers. Student B stated that a successful student is *"someone who balances both academic achievement and their personal life."* Similarly, Student G described a successful peer, saying, *"Besides attending classes, he's also working part-time and studying to become a teacher, managing to balance it all."* Likewise, Student F highlighted that success involves making the most of one's time both inside and outside university.

The three participants shared a common belief that finding a balance between academic and personal life is essential. Engaging in activities such as part-time work, spending time with friends, and enjoying hobbies, alongside attending classes, contributes to a more fulfilling university experience.

4.1.3. Environment

Real world application of skills. This concept refers to engaging in part-time jobs or volunteer roles alongside academic studies, both within and outside the university setting. It is closely linked to the idea of viewing university as a preparation phase for applying acquired skills and knowledge to future careers.

Student E believed that simply completing graduation research *"for the sake of graduating"* does not define success. Instead, she emphasized that true success lies in maintaining motivation and being able to apply what one has learned in the future. Similarly, Student G saw success as something achieved after graduation but cultivated during time attending university. He explained, *"From your first year to your fourth year you engage in research and other activities and then after graduation, you can apply the knowledge and experiences you've gained."* While he acknowledged that *"getting good grades"* represents a form of success, he believed that *"ultimate success comes after university."*

Student J shared a similar perspective, stating that success to her means *"gaining something that can be applied in some way in life"* and realizing that what was learned in university is *"actually useful."* Likewise, Student F reflected on her own experiences, noting that she gained practical

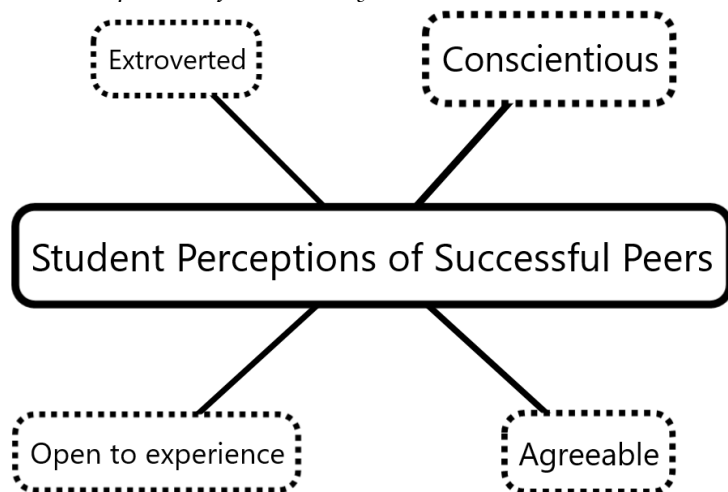
knowledge, not only, through classes and club activities, but also through part-time jobs outside university. She explained, “I’ve worked in a restaurant and as a front desk attendant at a hotel. I feel that jobs involving interaction with people and providing hospitality suit me, so I’m currently considering careers where I can work with people.” She viewed these experiences as a way of exploring career options, effectively linking her university learning to real-world applications.

4.2. Students’ Perceptions of Successful Peers

The main findings described in this section are visually summarized in Figure 3.

Figure 3

Visual Depiction of Personality Traits Students Associate with Successful Peers

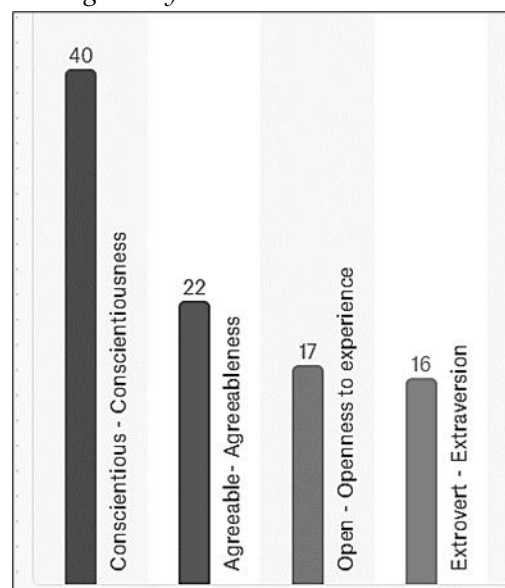


To address the second research question, participants were asked to identify a classmate or seminar member who they considered a “successful university student”; they then provided a pseudonym and indicated the student’s gender to help the interviewer visualize the individual. Participants then gave their reasons as to why they perceived this student to be successful, describing personality traits, behaviors, and other defining characteristics.

The analysis of these descriptions, as shown in Figure 4, revealed that perceived successful students commonly exhibited traits associated with *Conscientiousness*, *Agreeableness*, *Openness to Experience*, and *Extraversion*. Notably, none of the participants’ descriptions aligned with traits related to Neuroticism.

Figure 4

Coding Analysis Results: Themes Related to Personality Traits and Their Frequencies



4.2.1. Conscientiousness

A key trait associated with success was *Conscientiousness*. Participants described successful peers as being highly responsible and hardworking individuals with a strong sense of values and beliefs. Student A believed that his peer had a firm sense of his values and thoughts, describing him as strong-willed. He further noted that his peer expressed his ideas clearly and was not afraid to offer counterarguments when something did not feel right to him. Similarly, Student D saw his peer as serious and reliable, someone who consistently completed tasks properly.

Additionally, participants emphasized that their successful peers had a clear sense of direction and well-defined goals, which contributed to their strong academic performance and dedication. Student E said her peer consistently acted with her goals in mind, while Student H explained that her peer had already decided to pursue graduate studies and was planning to obtain a doctorate. Student J mentioned that her peer focused on joining a specific research lab and was putting in significant effort toward that goal, and Student F pointed out that her peer aspired to become a science teacher and was working as a tutor to gain relevant experience.

Participants also described their successful peers as independent and proactive individuals who took the initiative and made decisions on their own. Student A noted that his peer frequently contributed ideas and was among the most active members of their club. Student F described her peer as someone who independently selected courses that aligned with her future goals, and Student G observed that his peer often took initiative and was willing to start new projects on his own.

Interestingly, self-awareness also emerged as an important characteristic. Participants described their successful peers as individuals who were aware of their strengths and weaknesses and took proactive steps to improve while prioritizing their well-being. Student B observed that his peer occasionally skipped classes during busy weeks to manage his workload effectively, while Student D noted that his peer was highly self-reflective and frequently evaluated his own behavior. Student J shared that her peer initially tried to excel in all subjects but later scaled back to protect her health, realizing that letting go of difficult tasks was sometimes necessary.

Overall, participants described their successful peers as conscientious, goal-oriented, and proactive individuals who demonstrated independence, initiative, and self-awareness in both their academic and personal lives.

4.2.2. Agreeableness

Participants described successful peers as individuals who exhibited a blend of thoughtfulness, adaptability, and positivity. These peers were known for their consideration of others, often offering help without expecting anything in return. Student C, for instance, admired her peer's willingness to offer rides and described her as polite and considerate, emphasizing that "she really thinks about others". In addition to being kind, successful peers were described as having uplifting personalities. Student B appreciated one peer's sense of humor and the enjoyable atmosphere he created, while Student C portrayed her peer as both kind and engaging in conversation. Similarly, Student H noted that her successful peer was considerate, patient, and compassionate toward others. She added, "*She patiently explains things multiple times, which I think is very kind*". She shared a moment when, after making a mistake in an experiment, her peer comforted her by saying, "It's okay," which she felt revealed genuine kindness.

Participants also noted that successful peers were often generous with their time and knowledge. Student J remarked that her peer frequently shared expertise to support others during test preparation, and Student D highlighted a peer who regularly offered advice and prioritized maintaining good relationships within the community. Regarding communication and group dynamics, the participants perceived their successful peers as diplomatic and good listeners as they listened to others' opinions before making any decisions when holding discussions. Student C explained that her peer made decisions after listening to everyone's input, aiming to reach a

consensus. Student J described how her peer introduced her own opinion but quickly invited others to share theirs, creating a collaborative atmosphere.

These comments show that successful peers were seen to be generous and selfless individuals who did not expect anything in return. They are enjoyable to be around, as they are empathetic and willing to help others. They strive to create a social environment that encourages others to share their thoughts.

4.2.3. Openness to experience

The participants also described their successful peers as active individuals who engaged in a variety of activities both within and outside university settings. Student E said that her peer actively pursued anything that piqued her interest, noting her transition from customer service to joining a research lab and her involvement in sports like volleyball. Similarly, Student A explained that his peer had wanted to gain business experience while still a student, which led them to co-found an "analogue café" together. According to Student A, his peer wanted *"to understand how money flows and to create opportunities to learn about that because he felt it would be useful in a business context as a student."*

This enthusiasm for learning opportunities was also emphasized by Student F when describing her successful peer; she said that her peer reached out to professors and took courses outside her department. Student F explained that her peer contacted professors from other departments and enrolled in classes beyond her own academic program, choosing those she believed would be useful in the future. Similarly, Student J described her successful peer as someone receptive and open to new ideas, who actively socialized with a variety of people. She observed that her peer regularly interacted with individuals from different backgrounds and was skilled at integrating diverse perspectives. As Student J put it, *"She excels at combining her thoughts with others' opinions and rephrasing them in a way that's clear and easy to understand."*

These comments support the idea that successful students are willing to explore new ideas and opportunities while making the most of their university experience.

4.2.4. Extroversion

The participants described their successful peers as outgoing and sociable individuals who could easily engage with a wide range of people. Student E described her peer as someone who could talk to anyone without hesitation, and Student B observed that her peer interacted equally with everyone, showing no signs of favoritism. Furthermore, such peers' enthusiasm helped avoid awkward silences and kept discussions flowing. Student C noted, *"When we go somewhere, like a café, she keeps the conversation going. There's never any awkward silence."* Student B made a similar comment about his peer: *"I think he's good at lightening the mood and making things lively."* Likewise, Student D claimed that his peer had strong communication skills, noting that he seemed *"to have a good balance between work and communication."*

The participants also saw their successful peers as individuals who are socially aware and enjoy interacting with others, as exemplified in comments from three participants. Student C described her peer as someone who was friendly with many people and noted that her involvement in a dance club contributed to her visible social presence. Student G also commented that his peer frequently assumed leadership roles in social settings, often taking the initiative to plan and organize gatherings with friends. Student F pointed out that her peer was highly group-oriented, typically choosing to work collaboratively and bringing a gentle, calming demeanor to group interactions.

Interestingly, the participants highlighted that their peers, despite having a sociable nature, managed to balance their social lives with academic responsibilities, demonstrating commitment to their coursework. Student G noted that while his peer regularly spent time with friends, he remained attentive to his studies and did not neglect them. Student B supported this view, emphasizing that successful students were those who maintained a balance between academic and personal life. Student D added that although his peer was approachable, he became deeply

focused when engaged in his own work—so much so that others were often hesitant to interrupt him. These comments reinforce the idea that while successful peers enjoy social interactions and collaboration, they remain committed to their academic responsibilities, balancing their social and academic lives.

5. Discussion

5.1. Discussion on the Views of Success

Overall, findings of the study showed that the participants prioritize growth and self-discovery over traditional academic success, with a strong focus on gaining meaningful experiences and preparing for life after university. Following on, we will discuss similarities and differences with previous studies described in the literature review section.

The present study emphasizes the importance of achieving a balance between academic work, extracurricular activities, and personal life as a key factor for success. This finding aligns with Cachia et al. (2018), who emphasized that workload management and time management are crucial skills for academic achievement. Similarly, Acar (2023) identified time management techniques as essential for building effective study habits, reinforcing the idea that self-regulation plays a fundamental role in student success.

In terms of growth, success comprises not only the acquisition of knowledge and skills but also changes in thinking, attitudes, and personality. This perspective aligns with Cachia et al. (2018), who described success in terms of “personal growth.” Their study identified both intrinsic and extrinsic factors contributing to academic success, particularly self-management, that is, taking responsibility for one’s learning and recognizing one’s capabilities, as well as the development of communication skills and professionalism. Similarly, Danişman et al. (2021) emphasized that students often define success as achieving personal goals, self-improvement, and maintaining motivation throughout the learning process. These findings suggest that beyond academic performance, personal development is a crucial aspect of success.

A strong emphasis on real-world application also emerged from the present study. Participants viewed the ability to apply acquired skills and knowledge in practical situations as a defining element of success. This finding resonates with Cachia et al. (2018), who noted that “developing employability skills” is just as important as acquiring academic knowledge (p. 437). Similarly, Rowntree et al. (2016) found that students often defined their university success in terms of gaining access to job opportunities that would otherwise be unattainable. While previous studies emphasize skill development for employability, our findings suggest a subtle yet important distinction: The present study’s participants prioritized applying their skills not only in professional settings but also in diverse real-world contexts. This broader perspective implies that success is not merely about securing employment but also encompasses effectively using acquired skills in multiple aspects of life.

Another key theme was the role of fulfillment as a core component of success, with participants valuing academic, emotional, and social satisfaction. These findings align with Rowntree et al. (2016), who identified satisfaction with achievements and the fulfillment of career ambitions as key success factors. They go on to support O’Shea’s (2023) concept of “Embodied and Emotional Success,” which describes the sense of happiness and fulfillment students experience both before and after graduation. However, a notable difference emerges: while Rowntree et al. (2016) found that students often linked their aspirations for success to benefiting their families and communities, participants in the present study did not explicitly mention this connection.

This absence of community- or family-oriented goals marks a point of departure from prior research. Participants in this study placed greater emphasis on self-driven exploration and personal development, with little reference to external validation. Additionally, resilience and the overcoming of hardship played a less prominent role in our findings compared to earlier studies.

For instance, in the study by Rowntree et al. (2016) on overseas EAL students, the participants highlighted the role of family and community expectations in defining academic success,

particularly among African-born students. Rowntree et al. argue that, for most participants, shaping a well-rounded identity as a family member was just as important as academic performance and securing a job. For those with children, success was closely tied to their identity as role models within their nuclear families. Moreover, participants associated success with their commitment to, and responsibility for, the betterment of their communities, as well as their sense of worth within them. In contrast, findings of the present study do not suggest participants tie their view of success to their families or communities. Here it must be noted that one of the participants, Student F, did mention, while describing a successful peer, that her friend was aiming for a career in welfare because she wanted “to contribute to society in the future.”

Differences in findings between Rowntree et al. (2016) and the present study can be explained by several factors, foremost; differences in life stages and circumstances between the participants in respective studies. The participants in Rowntree et al.’s research were immigrants from diverse countries enrolled in an Australian university. They were older, ranging from 23 to 43 years old, with many holding a bachelor’s degree, having families, work responsibilities, or even returning to university for career changes. Their views on success were likely influenced by age, considerations of personal and professional growth, as well as job and financial security. In contrast, the present study’s participants were mainly single, younger students in their early 20s, most of whom had no previous university degrees, aside from the two graduate students, and little or no full-time work experience. They were full-time students and, thus, they were more likely to devote most of their time and energy to university-related activities, besides part-time jobs or club activities, than to family or work related duties.

Additionally, the simple fact of being an overseas student, as seen in Rowntree et al.’s study, may introduce unique challenges and stressors, prompting individuals to lean on family and community ties as sources of support and identity. Being part of a minority in a host country may also have strengthened their identity and commitment with their community members. Moreover, migrating to another country, such as Australia, may imply that these students were seeking greater opportunities for professional growth that were probably not offered in their home countries due to, perhaps, socioeconomic reasons. Conversely, being part of the majority and living in a more economically stable environment, such as Japan which has a well-developed public education system (World Population Review, 2025; World Top 20, 2024), likely provides more opportunities for our participants to focus on personal exploration, growth, and self-driven career decisions rather than inducing feelings of responsibility for the improvement of their own community. It is also worth considering that contemporary shifts in Japanese society, including globalization and evolving cultural norms, may be influencing younger generations to adopt more individualized perspectives on success. Future research could further explore these dynamics by examining how migration status, economic background, and cultural identity intersect to shape students’ definitions of success.

The study, conducted by O’Shea and Delahunty (2018), discusses external validation, in the form of faculty recognition and societal approval, as a key component of success. In complete contrast, our findings place greater emphasis on personal growth, fulfillment, and real-world application, with markedly less focus on external recognition from professors, family, or society at large. While O’Shea and Delahunty (2018) identify resilience and persistence in spite of obstacles as defining factors of success, our study highlights the importance of exploring opportunities, effective time management, and balancing various aspects of life rather than merely overcoming hardships.

Importantly, the participants in O’Shea and Delahunty’s study were students who were the first in their immediate families to attend university. As O’Shea and Delahunty (2018) note, for these “first-in-family students,” simply attending university and successfully completing the academic year represented a significant achievement in itself. The study argues that these students often experienced “impostor syndrome”, that is, feeling a limited sense of entitlement to their university placement. This context, we argue, helps explain why recognition and validation from family and faculty were particularly salient for them, and why resilience and persistence emerged as key

elements of their academic success. These differences go a long way to highlighting how students' diverse backgrounds help shape their perceptions of success. Future research, we suggest, could investigate how these differing perspectives influence long-term academic and career outcomes and go on to help identify the most effective support mechanisms for identifiably different student groups.

Other noted differences in the present study, when compared to previous research, may be explained by other factors such as the participants' major, gender, together with other demographic factors. Rowntree et al. (2016) examined students enrolled in a Bachelor's and Master's of Social Work program; a field where students are more than likely to view success in terms of helping others and making an impact on society. Cheung and Tang (2010), in a study of social work students in Hong Kong, found that volunteer work enhanced students' competence (an expected performance outcome reflective of educational success) by increasing knowledge and fostering a genuine concern for people and a readiness to be of service to others.

In Cachia et al.'s (2018) study, the participants were enrolled in a Psychology program where students considered external factors such as the "support available" from the institution and "people around them" to be part of their success. They related these external factors to existing intrinsic ones, such as interest in the field of study, willingness to learn, and goal-setting to develop personal and professional skills for success.

As for O'Shea and Delahunty's (2018) study, their participants belonged to a host of different institutions across Australia, making it difficult to determine whether their field of study influenced their views on success or not, as this was not explicitly reported. The authors even state, "these students seem to have a variety of yardsticks" (p. 1072) to measure their personal success and achievements. Nevertheless, 71% of the participants were women, with a significant portion from low socioeconomic backgrounds, with some identifying as having disabilities and others as being from rural areas. What they had in common was their prioritization of contributing to individual and societal well-being over merely achieving financial success. From this we can opine that gender and economic status may have influenced the stated views on academic success.

Similarly, in Acar's (2023) study, the participants were high achievers, purposely selected from five faculties, making it extremely difficult to determine whether their field of study influenced their views on success. However, given that the participants were high achievers, it is likely that they associated success with intrinsic factors such as strong study habits, self-discipline, motivation and skills rather than external factors such as institutional and social support.

5.2. Discussion on Personality

Based on our findings, successful students were perceived as conscientious individuals who set clear goals and demonstrated strong leadership and organizational skills while fostering supportive, empathetic relationships and a collaborative mindset. They were also seen as actively engaging in diverse activities promoting personal growth and career development, contributing to their individual learning and success. Additionally, they exhibited extroverted traits, interpersonal connectivity, taking the initiative in group settings, balancing social interactions with academic responsibilities, all while creating a thriving environment, both inside and outside the classroom. In short, they were highly conscientious, agreeable, open to experience, and extroverted.

Our findings, reported here, align with previous quantitative research on personality traits and academic achievement that used the Big Five personality framework to examine relationships with academic performance (Conard, 2006; Lourinho et al., 2017; Nofle & Robins, 2007; Wang et al., 2023). Previous studies have consistently shown that Conscientiousness is the strongest predictor of academic success at both high school and college levels, positively correlating with GPA, course performance, and effective learning strategies (Gray & Watson, 2002; Komarraju et al., 2011). Openness to Experience is associated with undergraduate success but has only weak correlations with high school GPA and overall academic performance, it does however, strongly predict intrinsic motivation (Hazrati-Viaria et al., 2004). Agreeableness is positively linked to exam

performance, verbal intelligence, and learning styles (Farsides & Woodfield, 2003). However, the effects of Extraversion on academic achievement seem to be mixed, with Furnham and Chamorro-Premuzic (2004) and McKenzie et al. (2004) finding that higher extraversion correlated with lower grades, while Wang et al. (2023) reported a positive effect on students' self-assessed academic performance. Chamorro-Premuzic and Furnham (2003) conversely, found no link between extraversion and exam scores but did note a positive relationship with final-year projects, attributing this to strong interpersonal skills.

While our qualitative data align with prior findings on Conscientiousness, Agreeableness, and Openness to Experience, our insights into Extraversion are limited by the small sample size and the inherent nature of our study. However, our participants did recognize Extraversion as a trait in their successful peers. Notably, these individuals were perceived as balancing their social lives with their academic responsibilities. This positive association between Extraversion and success may be interpreted, as suggested by Chamorro-Premuzic and Furnham (2003), in terms of interpersonal skills, such as those required in building rapport with university faculty and staff. Klinkhammer et al. (2024) also emphasize the importance of Extraversion for social interaction and communication. In a large-scale study, they found that extroverted adults pursued additional educational training, particularly in programs that involved volunteer work, organizational skills and resilience. In addition, they found that extraverted individuals were more likely to take on leadership roles in various contexts, including corporate environments. Interestingly, the successful students described by the participants in the present study were actively involved in a range of social activities. These included club participation, part-time work, and extracurricular projects outside the classroom. They were also described as individuals who interacted with a broad network of peers and assumed leadership roles in social settings. These observations, viewed alongside the work of Chamorro-Premuzic and Furnham (2003) and Klinkhammer et al. (2024), suggest that Extraversion may contribute positively to academic success, particularly when expressed through interpersonal competence and active social engagement.

The personality traits of the successful peers described in this study also closely align with those of *autonomous learners*. According to Benson (2011), autonomous learners are disciplined, open, and responsible individuals who control their own learning. They set and pursue personal goals and purposes, reflect on their actions, and make informed decisions about their next steps. They are also adaptable, able to negotiate their needs with others while remaining responsive to the goals and desires of their peers. Likewise, the successful students described in our study were also goal-setters who engaged in activities that supported their growth, made independent learning decisions, and demonstrated self-awareness by recognizing their strengths and weaknesses. They also took proactive steps to improve while maintaining a focus on personal well-being. Furthermore, they were described as generous and selfless, enjoying collaboration and contributing positively to group dynamics through their uplifting presence.

If successful learners are, as suggested, autonomous learners, it is worth considering whether autonomy is a skill developed over time or a characteristic rooted in personality. This question, originally posed by Benson (2011), invites further exploration into the relationship between autonomy and personality traits. While the answer is not straightforward, research does indicate a meaningful connection between the two variables.

For instance, Barrick and Mount (1993) found that managers scoring high in Conscientiousness and Extraversion performed better in roles that required autonomy, such as making independent decisions. Those high in Agreeableness, by contrast, were more successful in highly structured roles with lower ambiguity. Similarly, Albert and Highhouse (2021) reported that employees with a proactive personality performed well in environments that supported independent decision-making, while less proactive individuals fared better in procedural and interdependent settings. Taken together, these studies suggest that personality traits alone do not determine performance. Rather, their impact depends on the level of autonomy afforded by the environment. Traits such as Conscientiousness or Proactivity are more likely to manifest when autonomy is present, implying that the relationship between personality and performance is shaped by contextual factors.

In a university setting, these insights suggest that students with different personality traits may thrive in learning environments that align with their dispositions. For example, students high in Conscientiousness and Extraversion may excel in flexible, self-directed courses where they can take initiative and monitor their own progress. In contrast, students high in Agreeableness may benefit from more structured environments with clear expectations and consistent routines. Creating such varied learning environments can be challenging, as it requires careful pedagogical planning that considers the diverse learner profiles present in the classroom. It also demands sustained effort from educators to foster inclusive conditions that provide all students with the support and opportunities they need to thrive. Nevertheless, emerging technologies, particularly artificial intelligence (AI), may soon make it feasible to design learning environments that align more closely with students' individual personality traits.

6. Conclusions

The present study explored university students' perceptions of the personality traits associated with successful peers and their understanding of success within the context of Japan. Our findings provide valuable insights into the personality traits contributing to academic and personal growth, aligning somewhat with previous quantitative research on personality. They further highlight how students define success beyond traditional measures such as grades and GPA, reinforcing prior qualitative research on academic success.

Our study supports previous research indicating that *Conscientiousness*, *Agreeableness*, and *Openness to Experience* are key traits linked to successful students. Participants described successful peers as being individuals with strong goal-setting abilities, having leadership, organizational ability, and a collaborative mindset. They also perceived these peers as extroverted individuals who balanced social engagements with academic responsibilities. While our findings align with prior quantitative studies on personality and academic performance, they also underscore the need for further research into the role of *Extraversion* in academic achievement.

Moreover, our research emphasizes that students prioritize self-discovery, growth, and fulfillment over traditional metrics of success such as GPA, viewing success in university as a fulfilling experience, encompassing both personal and academic growth. They found fulfillment through friendships, extracurricular activities, and academic pursuits, with many highlighting the importance of balancing studies with part-time work and club involvement. This balance aided them in developing organizational and time-management skills. Personal growth was achieved through engaging in diverse activities, developing soft skills, and connecting with individuals from varied backgrounds, while seeking advice from senior students and professors played a key role. Academic success was also associated with applying knowledge to real-world contexts, which participants saw as essential for future career development while at the same time validating their decision to attend university. These perspectives align with existing literature on personal development, the real-world application of knowledge, and self-regulation as crucial factors in academic success.

However, our findings reveal notable differences in students' perceptions of success when compared to previous studies reviewed in the literature. For example, while research on international and first-generation university students highlighted the importance of family and community expectations, our participants—mostly younger, full-time students—focused more on self-fulfillment, academic-work balance, career preparation, and meaningful experiences. Differences in life stages, cultural contexts, and socio-economic stability across research findings, as discussed in this study, may explain these variations.

Overall, this study contributes to a broader understanding of student success by emphasizing the interplay between personality, self-regulation, and evolving societal perspectives. Our findings are valuable in the field of learner autonomy and advising, which focuses on understanding learners' individual differences; goals, motivations, beliefs, and values. Future research should explore how cultural and economic contexts shape students' definitions of success and how personality traits influence long-term academic and career outcomes. A deeper understanding of

these factors can only help educators and institutions better support students in achieving their goals and aid in developing the skills necessary beyond graduation.

AI and technology usage: Grammarly was used for identifying and correcting grammar mistakes. AI-supported software was utilized for language translation. Further details regarding the use of translation tools are provided in the Methodology section of the manuscript. All intellectual content and research findings remain solely the responsibility of the authors.

Author contributions: All authors made significant contributions to the study, including data analysis, validation of the coding process, discussion of the findings, and revision and improvement of the manuscript.

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References

- Acar, F. (2023). Underlying reasons behind the achievement of successful university students: A phenomenological inquiry. *Journal of Pedagogical Sociology and Psychology*, 5(4), 68–81. <https://doi.org/10.33902/jpsp.202313417>
- Albert, M. A., & Highhouse, S. (2021). Perceived autonomy moderates the relation of proactive personality with job crafting. *Journal of Personnel Psychology*, 20(3), 146–149. <https://doi.org/10.1027/1866-5888/a000272>
- Barrick, M. R., & Mount, M. K. (1993). Autonomy as a moderator of the relationships between the big five personality dimensions and job performance. *Journal of Applied Psychology*, 78(1), 111–118. <https://doi.org/10.1037/0021-9010.78.1.111>
- Benson, P. (2013). *Teaching and researching: Autonomy in language learning*. Routledge.
- Cachia, M., Lynam, S., & Stock, R. (2018). Academic success: Is it just about the grades? *Higher Education Pedagogies*, 3(1), 434–439. <https://doi.org/10.1080/23752696.2018.1462096>
- Chamorro-Premuzic, T., & Furnham, A. (2003). Personality traits and academic examination performance. *European Journal of Personality*, 17(3), 237–250. <https://doi.org/10.1002/per.473>
- Cheung, C.-K., & Tang, K.-L. (2010). Socialization factors conducive to social work students' gain in competence: Experience in the Hong Kong SAR, China. *Journal of Social Work*, 10(1), 42–58. <https://doi.org/10.1177/1468017309349990>
- Conard, M. A. (2006). Aptitude is not enough: How personality and behavior predict academic performance. *Journal of Research in Personality*, 40(3), 339–346. <https://doi.org/10.1016/j.jrp.2004.10.003>
- Costa Jr., P. T., & McCrae, R. R. (1992). The five-factor model of personality and its relevance to personality disorders. *Journal of Personality Disorders*, 6(4), 343–359. <https://doi.org/10.1521/pedi.1992.6.4.343>
- Danişman, Ş., Yıldırım, D., & Ünlüer, E. (2021). Success experiences of students: a phenomenological research. *Journal of Uludag University Faculty of Education*, 34(2), 436–478. <https://doi.org/10.19171/uefad.882775>
- Farsides, T., & Woodfield, R. (2003). Individual differences and undergraduate academic success: The roles of personality, intelligence and application. *Personality and Individual Differences*, 34(7), 1225–1243. [https://doi.org/10.1016/S0191-8869\(02\)00111-3](https://doi.org/10.1016/S0191-8869(02)00111-3)
- Furnham, A., & Chamorro-Premuzic, T. (2004). Personality and intelligence as predictors of statistics examination grades. *Personality and Individual Differences*, 37(5), 943–955. <https://doi.org/10.1016/j.paid.2003.10.016>
- Gray, J. A., & Watson, D. (2002). General and specific traits of personality and their relation to sleep and academic performance. *Journal of Personality*, 70(2), 177–206. <https://doi.org/10.1111/1467-6494.05002>

- Hazrati-Viari, M., Rad, A. M., & Torabi, S. S. (2012). The effect of personality traits on academic performance: The mediating role of academic motivation. *Procedia - Social and Behavioral Sciences*, 32, 367-371. <https://doi.org/10.1016/j.sbspro.2012.01.055>
- Klinkhammer, D., Rüther, J., & Schemmann, M. (2024). Exploring the association between adult education, personality traits, and civic participation: An analysis of national education panel study data. *Adult Education Quarterly*, 74(4), 283-301. <https://doi.org/10.1177/07417136241255677>
- Komarraju, M., Karau, S. J., Schmeck, R. R., & Avdic, A. (2011). The big five personality traits, learning styles, and academic achievement. *Personality and Individual Differences*, 51, 472-477. <https://doi.org/10.1016/j.paid.2011.04.019>
- Lourinho, I., Ferreira, M. A., & Severo, M. (2017). Personality and achievement along medical training: Evidence from a cross-lagged analysis. *PLOS ONE*, 12(10), e0185860. <https://doi.org/10.1371/journal.pone.0185860>
- McKenzie, K., Gow, K., & Schweitzer, R. (2004). Exploring first-year academic achievement through structural equation modelling. *Higher Education Research & Development*, 23(1), 95-112. <https://doi.org/10.1080/0729436032000168513>
- Noftle, E. E., & Robins, R. W. (2007). Personality predictors of academic outcomes: Big five correlates of GPA and SAT scores. *Journal of Personality and Social Psychology*, 93(1), 116-130. <https://doi.org/10.1037/0022-3514.93.1.116>
- O'Shea, S., & Delahunty, J. (2018). Getting through the day and still having a smile on my face! How do students define success in the university learning environment? *Higher Education Research & Development*, 37(5), 1062-1075. <https://doi.org/10.1080/07294360.2018.1463973>
- Rowntree, M. R., Zufferey, C., & King, S. (2016). 'I don't just want to do it for myself': Diverse perspectives on being successful at university by social work students who speak English as an additional language. *Social Work Education*, 35(4), 387-401. <https://doi.org/10.1080/02615479.2015.1079608>
- Wang, H., Liu, Y., Wang, Z., & Wang, T. (2023). The influences of the Big Five personality traits on academic achievements: Chain mediating effect based on major identity and self-efficacy. *Frontiers in Psychology*, 14, 1065554. <https://doi.org/10.3389/fpsyg.2023.1065554>
- World Population Review. (2024). *Education rankings by country* 2025. <https://worldpopulationreview.com/country-rankings/education-rankings-by-country>
- World Top 20. (2024). *Japan: Education data*. <https://worldtop20.org/japan-3>