

Balancing Brilliance: Understanding Academic Well-Being in High-Achieving Students

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Group 22a - Enhancing Well-being in Academia through Self-Determination Theory (SDT)

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Abstract

Students continue to report disproportionately high levels of distress and impaired well-being. However, the development of effective interventions is hindered by conceptual ambiguities surrounding the definition of well-being and a lack of targeted research on specific student populations, such as high-achieving students. This study therefore aimed to address these issues by exploring how well-being is conceptualised among students and identifying specific factors contributing to it for high-achieving and non-high-achieving students. Following a qualitative approach grounded in Self-Determination Theory, semi-structured interviews were conducted with 12 undergraduate students from diverse nationalities and fields of study and analysed using inductive and deductive methods. Results indicate that well-being should be understood as a complex and multifaceted concept and that its definition should be expanded to encompass physical well-being, the impact of stress on mental well-being, and the concept of balance. Furthermore, the applicability of Self-Determination Theory in understanding academic well-being was confirmed, while differences for high-achieving students were highlighted particularly in terms of autonomy, competence, and stress. Additionally, potential extensions to Self-Determination Theory are discussed, and a novel link between autonomy, competence, and achievement, which may be specific to high-achieving students, is proposed. Further research is needed to empirically test this connection and integrate it within theoretical well-being frameworks.

Keywords: Well-Being, Self-Determination Theory, Basic Needs, High-Achieving Students

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"Happiness and education are, properly, intimately connected. Happiness should be an aim of education, and a good education should contribute significantly to personal and collective happiness" (Noddings, 2003, p.1, as cited in Bückner et al., 2018, p. 91). In light of this, contemporary educational discourse emphasises that institutions should not only provide formal education but also ensure it fosters student well-being (OECD, 2017; Okanagan Charter, 2015). However, research indicates that university students are more prone to experiencing distress and mental health challenges compared to the general population (Eisenberg et al., 2013; Larcombe et al., 2016; Stallman, 2010). In the Netherlands, 56% of students in higher education report experiencing high to very high levels of stress and 53% indicate to have experienced impairment in their lives due to mental health issues (RIVM, 2023). These findings are crucial, given that both well-being and academic achievement are important indicators of positive psychological functioning and that successful students not only perform well academically but also find satisfaction in their educational experience (OECD, 2017; Suldo et al., 2006). Furthermore, student well-being is associated with numerous positive outcomes, such as higher self-control, higher grades, and less procrastination (Howell, 2009; Walls & Little, 2005; Wheeler & Magaletta, 1997).

Aligned with this optimistic view of well-being, the current study embraces a positive psychology framework. This perspective emphasises individuals' strengths, positive emotions, life satisfaction, and overall psychological flourishing rather than focusing on the absence of distress or pathology (Seligman & Csikszentmihalyi, 2000). Traditionally, studies employing this approach focus on individuals and groups that experience desirable outcomes to understand the processes and mechanisms contributing to their success (Linley et al., 2006). It is therefore surprising that one of such groups, namely high-achieving students, defined by their "excellent academic performance" (Jeremy & Fisher, 2012, p. 476), has received relatively limited attention (Pollet & Schnell, 2017; Vialle et al., 2007). Academic high achievers are relevant in the study of well-being due to their unique stressors and challenges, as they must balance high academic demands with personal life, which can have

long-term implications for their psychological health and success, and often serve as role models within educational institutions (Boyle, 2021; Cuevas et al., 2017; Plominski & Burns, 2018; Walker, 2012). Despite some research on high-achieving students (e.g., Pollet & Schnell, 2017; Salmela & Uusiautti, 2015; Suldo et al., 2018), the specific factors and needs contributing to their well-being remain insufficiently explored. Furthermore, the definition of well-being, especially within academia, lacks clarity, with various authors proposing diverse understandings of the term (Centre for Education Statistics and Evaluation, 2015; Klitz et al., 2020). This lack of consensus complicates the scientific study of well-being, making it difficult to interpret and compare results across studies and construct effective interventions. This study seeks to address this gap by investigating the conceptualisations and experiences of well-being among both high and non-high-achieving university students.

Conceptualizations of Well-Being

In the educational context, three distinct definitions of well-being have been proposed (Fraillon, 2004, as cited in Centre for Education Statistics and Evaluation, 2015). Noble et al. (2008) summarised these as understanding well-being as "a sustainable state of positive mood and attitude, resilience, and satisfaction with self, relationships, and experiences at school" (p.7). While this definition may provide a starting point, it remains inconclusive, with various other conceptualisations of well-being suggested throughout the literature (e.g., Beiser, 1974; Ryan & Deci, 2001; Tay & Diener, 2011). In light of this conceptual unclarity and building upon prior research by Klitz et al. (2020), our study seeks to gain a more comprehensive understanding of how students themselves define and perceive well-being at the university, aiming to explore the diverse perspectives and needs that contribute to its multifaceted nature.

Our research employs the approach of Self-Determination Theory (SDT, Ryan & Deci, 2000) to well-being, which is rooted in positive psychology. SDT posits that well-being is linked to fulfilling three basic psychological needs: autonomy, competence, and relatedness. Autonomy entails a desire for self-determination and the ability to make choices aligned with personal values, while competence focuses on the need for effectiveness in

overcoming challenges. Relatedness involves an innate drive for meaningful connections and a sense of belonging within social interactions. The satisfaction of these needs fosters intrinsic motivation. According to SDT, intrinsic motivation is linked to higher well-being, as individuals derive joy and fulfilment from activities that align with their values, interests, and personal goals. SDT also emphasises that creating environments supportive of these needs fosters self-determination and contributes to individual flourishing.

Research supports positive associations between SDT and vocational commitment (Kunnen, 2021; Singhal & Rastogi, 2018) and negative associations with depressive symptoms (Jiang & Tanaka, 2022). Moreover, studies on psychological need fulfilment in academia indicate that these needs contribute to student well-being through contextual and interpersonal aspects in the learning environment, such as positive teacher-student and peer relationships (Jiang & Tanaka, 2022; Kiltz et al., 2020; 2023; Niemiec & Ryan, 2009; Stanton et al., 2016).

High Achievement and Well-Being

Like defining well-being, defining high achievement in students is challenging due to its contextual nature. A student recognised as exceptional in one institution of higher learning may be deemed average in another, given variations in local standards and educational systems (Robinson, 1997; Suldo et al., 2018). Generally, gifted individuals are identified by their heightened intellectual, motivational, or creative abilities (Renzulli, 2011). However, not every gifted student must necessarily be high-achieving; giftedness is better understood as a potential that may lead to exceptional accomplishments when supported by a conducive social and psychological environment (Pollet & Schnell, 2017). One environment often associated with giftedness at the undergraduate level are honours colleges, offered by some institutions to accommodate the specific needs of gifted students (Neumeister, 2004; Rinn, 2005; Rinn & Plucker, 2004). Honours colleges aim to provide personalised instruction through small class sizes, close student-faculty interaction, interdisciplinary content, and challenging educational platforms (Hébert & McBee, 2007; Brimeyer et al., 2014; Rinn & Plucker, 2004). Consequently, honours colleges offer gifted students the opportunity to

integrate into a community of like-minded peers facing similar opportunities and challenges (Plominski & Burns, 2018).

Consistent with previous research (e.g., Boazman et al., 2012; Neumeister, 2004; Plominski & Burns, 2018; Rinn, 2005; Rinn & Plucker, 2004), our study will use honours students as exemplars of gifted and high-achieving individuals in undergraduate education and analyse their perceptions and experiences of well-being within the academic context. Conceptualising honours college membership as a form of high achievement in academia, we will henceforth refer to non-honours students as non-high-achieving students. This categorisation does not imply that these students lack high achievement in other domains of life or that their grades are poor. Instead, it serves as a conceptual distinction to align our findings with previous research and establish a meaningful criterion for defining high achievement in the present study.

Research on the well-being of gifted students is still limited and ambiguous and often restricted to children and adolescents (Plominski & Burns, 2018; Pollet & Schnell, 2017). Existing studies yield inconclusive results, with some suggesting higher well-being (Bergold et al., 2020; Jung, 2024; Mueller, 2009; Plominski & Burns, 2018), others indicating lower levels of well-being, as well as elevated rates of anxiety and depression (Cuevas et al., 2017; Luthar et al., 2020; Vialle et al., 2007), and some finding no significant differences (Boazman et al., 2012; Zeidner & Shani-Zinovich, 2011). Meta-reviews by Bückner et al. (2018) and Zeidner (2018) also note inconclusive findings, indicating a lack of consensus on the well-being of gifted students.

Some research, however, suggests that, although no meaningful differences in well-being could yet be reliably established in the literature, the factors contributing to well-being may differ between non-high achieving students and high achievers (Pollet & Schnell, 2017). For instance, Wirthwein and Rost (2011) propose that positive participation in school may hold greater significance for the well-being of gifted individuals due to their heightened intellectual potential and, consequently, greater centrality for individuals' experiences. However, little is currently known about the specific needs of gifted students. This study,

therefore, aims to examine the experiences of gifted, high-achieving students to fill the current gap in research.

Research Questions

In line with the research of Klitz et al. (2020) and recognizing the lack of consistency in definitions of student well-being in the existing literature, our study's first objective is to further investigate the conceptualization and experience of well-being from a qualitative and positive psychological perspective among university students. Thus, the first aim of our research is to answer the following question:

RQ1: How do university students conceptualize well-being in the context of academia?

The second research aim is to investigate the factors contributing to and shaping experiences of well-being among both high-achieving and non-high-achieving students. Following Pollet & Schnell's (2017) suggestion that high-achieving students may experience well-being differently based on distinct influences and circumstances, we anticipate that while the overall perceptions of well-being may not differ drastically between these groups, the specific factors and contexts influencing their well-being might vary. Therefore, our research aims are framed by the following questions:

RQ2: How do academically high-achieving students experience well-being at the university?

RQ3: How do academically non-high-achieving students experience well-being at the university?

Method

Participants

A sample of twelve university students participated in this study, aligning with Guest et al.'s (2006) suggestion that twelve interviews are sufficient for data saturation in qualitative studies. The sample included four first-year, one second-year, six third-year, and one fourth-year students, ensuring equal representation of male and female participants. All participants were between 18 and 24 years old, and five were Honors College students. Except for one from Minerva Art Academy, all participants were from the University of Groningen in the Netherlands, representing the Faculty of Behavioural and Social Sciences (n = 4), the

Faculty of Science and Engineering (n = 4), the Faculty of Arts (n = 1), University College Groningen (n = 1), and the Faculty of Economics and Business (n = 1). The sample's diversity extended to nationality, including participants from the Netherlands (n = 4), Germany (n = 2), Bulgaria (n = 1), Romania (n = 1), Slovenia (n = 1), Slovakia (n = 1), Jordan (n = 1), and France-Mauritius (n = 1). For detailed demographic information, refer to Appendix A. Participants were recruited through the researchers' networks via WhatsApp, making the sample a convenience sample. Participation was voluntary and uncompensated. The interviews were conducted in April 2024 as part of a bachelor thesis course, and it was ensured that interviewers did not interview participants they knew prior to the study.

Procedure and materials

Individual, semi-structured interviews were conducted using an original interview script, informed by similar studies (e.g., Hove et al., 2018; see Appendix B). The script included questions about the conceptualisation and experience of well-being, specific factors from SDT (Ryan & Deci, 2000), and other related factors.

For the conceptualisation of well-being, we explored how participants understood well-being in general and within academia. For the specific factors of SDT (autonomy, relatedness, and competence), we examined participants' experiences and their perceived impact on well-being. We also investigated additional factors such as resilience, stress, value attainment, and achievement, as well as their effects on well-being. In addition, specific questions were tailored for Honors College students to delve deeper into their unique experiences.

The study received approval from the Ethics Committee of the Faculty of Behavioural and Social Sciences (Research Code PSY-2324-S-0302). Participants were provided with detailed information and signed informed consent forms, as well as demographic questionnaires, before the interviews (Appendix C). Interviews ranged from 27 to 90 minutes in length and were recorded, transcribed, and anonymised. After transcription, audio recordings were deleted, and participants were assigned randomly generated code names to ensure confidentiality, which will also be used in the discussion of our results.

Data Analysis

The analysis of the interviews integrated both deductive and inductive approaches, as its aim was twofold: to assess the reflection of our theoretical framework, particularly SDT, in our participants' responses while also advancing these theoretical understandings. Aligned with our study's objective to investigate students' conceptualisations of well-being, following Kiltz et al. (2020), we employed predefined codes deductively. These codes were derived from Kunnen and Krom's (2017) study's codebook and grounded in the theoretical foundations discussed earlier. Furthermore, we implemented Braun and Clarke's (2006) inductive thematic analysis approach, which prioritises uncovering underlying patterns of meaning over emphasising frequency measures. This approach enabled our analysis to remain receptive to responses and patterns not anticipated by our study's theoretical framework, enriching our understanding and providing deeper insights into our participants' experiences. The coding process was conducted using Atlas.ti, a qualitative data analysis software. Atlas.ti was also used for code-document analysis, which helps to identify and visualise relationships between codes and documents, and code-co-occurrence analysis, which examines the frequency and context of overlapping codes to uncover deeper patterns in the data.

Coding process

To maintain consistent coding and internal validity, we followed O'Conner and Joffe's (2020) intercoder reliability approach. This involved a systematic cycle of code generation, application, and evaluation until saturation was reached (Williams & Moser, 2019). We alternated between individual and group work to enhance reliability.

Following the coding scheme developed by Kunnen and Krom (2017), we initiated the coding process by systematically applying existing codes deductively to six transcripts, assigning one to each researcher. Simultaneously, we engaged in inductive coding to identify and create new codes for aspects not covered by our existing framework. After finalising the initial coding phase, the research team jointly coded two interviews. This collaborative effort

aimed to review and consolidate the existing codes into coherent categories and themes, laying the groundwork for a preliminary codebook to direct subsequent coding. We also integrated theoretical concepts guiding our research during this phase, such as SDT (Deci & Ryan, 2000). Using the preliminary codebook as a reference, all interviews underwent a second round of coding, in which two group members independently analysed the same two interviews each, thereby ensuring reliability. Subsequently, the group convened to discuss the codebook again, further refining and elaborating on the emerging themes. This iterative approach was repeated twice until saturation was achieved for all meaningful aspects of participants' responses, and the group reached a consensus on a finalised codebook. The finalised codebook (see Appendix D) was subsequently employed to code each interview independently by two researchers, thereby reinforcing inter-coder reliability.

Results

The analysis of the interview data revealed several key themes related to the conceptualisation and experience of well-being among university students. In line with our research questions, we will first examine how students conceptualised well-being within the academic context (RQ1). Following this, we will explore the specific factors influencing well-being among high-achieving and non-high-achieving students, discussing both similarities and differences (RQs 2 and 3).

Conceptualization of Well-Being

In our first research question, we explored how participants conceptualised well-being in general and within the university context. Their responses revealed five key components of well-being: mental well-being, physical well-being, happiness, satisfaction, and balance (see Figure 1, Appendix E). Mental well-being emerged as the most frequently mentioned component (31 mentions), followed by balance (24), happiness (18), physical well-being (17), and satisfaction (8). Notably, most participants indicated the importance of multiple components in their overall sense of well-being.

Mental Well-Being

Participants described mental well-being positively as the ability to function effectively in daily life and negatively as the absence of stress, depression, or anxiety. Some also linked mental well-being to happiness. Code co-occurrence analysis showed that mental well-being was often mentioned alongside stress-related codes: negative effects of stress (7 mentions), the influence of stress on well-being (6), and negative well-being (5). This suggests that mental well-being may become particularly salient when threatened by stress. Specifically, two participants noted that stress adversely affected their mental well-being, whether they confronted the stress directly or ignored the stressors, with both leading to decreased well-being.

Balance

The concept of balance was important for our participants. It encompasses various forms, such as the balance between mental and physical well-being and between university and social life. One participant described balance as "managing all parts of my life equally, making sure nothing is left out" (Manaia). Thus, balance is not necessarily a distinct aspect of well-being but rather underscores the interconnectedness of the other components of well-being mentioned.

Happiness

Happiness was another crucial component, highlighting the affective side of well-being. One participant articulated this connection by saying, "Well-being in general, I think, means how you feel. If you feel good, if you feel happy, that's well-being" (Robert). Happiness was closely linked to the positive definition of mental well-being, focusing on positive experiences rather than the absence of negative ones.

Physical Well-Being

Physical well-being was relevant in various forms. Participants described it negatively as "being free from disease" (Julia) and positively as the presence of health and the ability to engage in sports and social activities. Physical activity was furthermore mentioned frequently as a coping strategy against stress, indicating its dual role in enhancing well-being and

buffering it against threats. The concept of balance was again relevant here, with multiple participants linking physical to mental well-being, emphasising a holistic perspective.

Satisfaction

Satisfaction was also mentioned as a component of well-being, described as a "general contentment with where you are now" (Manaia) and "being satisfied with what you are doing" (Andrey). One participant noted that even a well-balanced life would not be genuinely fulfilling without satisfaction in what one is doing. Thus, satisfaction, while not a central theme for all, added an important dimension to the conceptualisation of well-being for some participants.

In summary, our participants provided both positive and negative definitions of well-being, highlighting its multifaceted nature. Positively, well-being was seen as the ability to function in daily life, experience happiness and satisfaction, and engage in physical activities. Negatively, well-being was understood as the absence of stress, depression, anxiety, and physical and mental illness. The broader concept of balance, both among different facets of well-being and between life domains such as university and social life, was emphasised by many participants. This indicates that while each distinct component is important, well-being is primarily achieved when these components co-occur, presenting well-being as a holistic and multifaceted concept. Mai's conceptualisation illustrates this: "Well-being means to me that I feel physically and emotionally healthy, and I can do things that I want to do and that I'm not limited by it, and that I feel like I belong somewhere, and I have a good social circle. I think I'm just at ease. I know where I belong. I am feeling well physically. I can do things. I feel well emotionally, I feel supported."

Well-Being among High and Non-High Achieving Students

In line with our second and third research questions, we explored the experiences of and influences on well-being for both high and non-high-achieving students. Our analysis of the interviews revealed six important components that participants indicated affect their well-being: autonomy, competence, achievement, relatedness, stress, and values. Out of these components, stress and relatedness were the most frequently mentioned concerning well-

being (56 and 49 mentions, respectively), followed by autonomy and competence (32 each), values (23), and achievement (16). The relationships between all factors and their contributions to well-being are visualised in Figure 2 (Appendix E).

Generally, no meaningful differences were found in how high and non-high-achieving students conceptualised these components. However, some differences emerged in the components' effect on well-being and the importance that participants attributed to them, which will be explored in the following sections.

Autonomy

Our participants agreed that experiences of autonomy positively contribute to well-being. Mai captured this pattern by saying, "If I feel like I am in control and I can manage everything myself, I think that does positively influence my well-being. But I think if I don't feel as much in control, I think it does negatively impact it."

Three distinct types of autonomy emerged in participants' responses, each potentially influencing well-being differently and to different extents. In the context of the university, participants mentioned autonomy in aligning their studies with their interests and preferences. Nina illustrated this by saying, "I feel like I'm very much in control because we can choose all the courses that we want to take." Another type of autonomy mentioned was the perceived freedom to make choices for one's future independently, free from external limitations such as the opinions and concerns of friends and family or financial and geographical constraints. David suggested he has "the freedom to do quite a lot of things because [he is] an honours student," indicating that Honors College membership may be linked to greater autonomy in this sense. Lastly, autonomy also referred to feeling control over one's workload and tasks. Sophie described this as, "To be in control, it means that I'm on top of my material. (...) Back last year, in the second year, I always felt like I was not on top of my material. So, as a result, I was never in control. And as a result, my well-being just skydived."

Frequency analysis showed that high-achieving students mentioned autonomy more often than non-high-achieving students (19 vs. 13 mentions) despite there being fewer high-

achieving students in the sample. Content analysis further revealed that high-achieving students discussed the three types of autonomy more extensively and placed greater value on them, while non-high achievers had more abstract discussions of control. Overall, while autonomy appeared to be important to both groups, high-achieving students mentioned it more often and discussed its relevance in more detail, indicating a heightened value on the different kinds of autonomy outlined.

Competence

Competence, as described by our participants, was primarily concerned with their feeling of and ability to manage their academic tasks successfully, such as "manage[ing] their deadlines on time" (Lisa). Participants indicated that they felt more competent when dealing with higher workloads or more difficult tasks, which also contributed to their well-being: "I feel really confident because this year I'm trying to do 75 points in one year and for now I'm on track. (...) That makes me feel really competent" (Nina). However, participants like Sophie also reported negative effects on their well-being when they were unable to manage their desired workload: "I always felt like I'm underperforming. (...) I had this state of mind that everything is going bad. I don't know anything. I don't feel secure in my degree. (...) I wouldn't say that my well-being was good."

Experiences of competence were also linked to the theme of self-confidence, while a lack of competence was associated with self-doubt. Experiences of competence contributed positively to participants' self-concept, while experiences of incompetence had the opposite effect. Specifically for high-achieving students, the theme of imposter syndrome emerged, with participants feeling like they were surrounded by others who were "better" and "smarter" (Lisa), thus feeling out of place. However, this group of students mentioned the influence of competence on well-being much less than normal-achieving students (13 vs. 19 mentions, respectively), suggesting that while the experience of competence may be more relevant for the latter group to feel well, autonomy may play a more prominent role for the former.

Lastly, Sophie illustrated a possible connection between autonomy and competence: "Being in control (...) the result is being competent. (...) If I'm not in control, there's no

competence factor. And then because there's no competence factor, there's no big well-being." This suggests that autonomy, competence, and well-being may be interlinked, with autonomy potentially serving as a prerequisite for competence.

Achievement

Unlike the factors discussed so far, most participants did not report that academic achievements generally contributed to their overall well-being. Instead, achievements had the potential to make them feel happy and proud, thus contributing to a specific component within the broader conceptualisation of well-being. In contrast, the absence of achievement had a more emotional impact, with participants feeling sad or crashing down after not reaching a desired exam score. This emotional impact was especially prominent for high-achieving students: while non-high-achievers generally reported feeling happy after reaching their goals, high-achievers indicated strong adverse effects if they failed to do so.

Participants also reported different conceptualisations of achievement, including obtaining high grades, understanding the material, being successful in academia, putting in effort, receiving recognition from others, and using achievements to progress in life. Another theme that was primarily prominent among non-high-achieving students was the need to fulfil expectations, either posed by themselves or others. Apart from this, all themes were prominent among both groups, with conceptualisations and expectations for achievements varying greatly between individuals.

Relatedness

All participants agreed that relatedness was a central component contributing to their well-being. Julia expressed this sentiment: "The main reason why I feel so happy is because I really found my people (...) I feel super connected to them and spend a lot of time with them." Both high-achieving and non-high-achieving students noted the importance of relatedness and highlighted that shared experiences and identities contribute to their sense of belonging both within and outside the academic context. Participants emphasised the value of a community where they feel connected, settled, and comfortable. This sense of

community was described as a buffer against adverse situations, as having friends provides happiness and someone to talk to.

Lisa, the only high-achieving participant to mention the Honors College specifically, stated: "I think we can comfort each other a lot because we're going through similar things. Especially in honours because the sense of pressure is really there." This ties closely to the theme of support, which emerged at various levels during the interviews. As highlighted in the previous quote, peer support was crucial for resilience to academic challenges and helped find motivation and strength to tackle difficult tasks together. Additionally, support from families and partners was mentioned as an essential source of practical and emotional guidance, enhancing individuals' ability to cope with challenges and thereby promoting well-being. Teacher support also emerged as a meaningful theme. Participants indicated that having a connection with their teachers was important, consisting of both practical academic help and interpersonal interactions. Experiences with teacher support varied, with some participants noting limited opportunities for individual interaction, while others described closer relationships.

However, all kinds of support impacted participants' well-being, as support was also mentioned as a coping strategy for dealing with stress and positively influenced how participants managed the lack of other well-being factors.

Stress

Stress emerged as an important factor negatively influencing well-being in nearly all interviews. Participants' experiences with stress are encapsulated in the following quote from Mai: "Stress generally very negatively influences my well-being. I always feel a bit restless and irritated and a bit on edge." The primary sources of stress identified were financial problems and stress within the university context.

Regarding financial stress, participants expressed concerns about the insecurity surrounding their life expenses. University-related stress, however, appeared more complex, with participants citing various stressors. Sophie illustrated this complexity: "Stress for me, I experience it on different levels. First of all, I just have the general stress factor of like, oh,

no, the exams are here. I have to start studying. (...) Then the stress that comes directly from realising I don't understand the whole material yet. (...) So then the stress of not being on top of things, not being completely in control of my studies, not being completely in control of my knowledge. That's a big factor."

Thus, University stressors included time pressure, overwhelming workloads, and perceived lack of competence or control (autonomy). Although no identifiable differences in stress levels were found between high and non-high-achieving students, the latter group made more general statements about the negative impact of stress on their well-being. In contrast, high-achieving students could identify specific stress contributors, particularly noting the detrimental impact of a lack of autonomy in managing their program requirements.

Both groups employed similar coping strategies: engaging in art, spending time outside, talking to friends and family, practising mindfulness, physical activity, spending time alone, solution-focused coping, stress avoidance, taking breaks, and time management.

High-achieving students additionally mentioned reframing and taking breaks. Reframing involves placing stressors and reactions in a broader context, viewing stress as a normal and functional response to life's challenges, closely related to resilience and optimism. Taking breaks was particularly important for high-achieving students dealing with high workloads, as they acknowledged the limitations of their cognitive capacities and decided to return to their tasks later, demonstrating self-reflective capabilities. Finally, the coping strategy of communicating with friends and family is closely linked to another contributor to well-being, relatedness, which will be analysed next.

Values

The range of values reported by participants was extensive (refer to Codebook Appendix D for a comprehensive overview). Among the most frequently mentioned values were relatedness (29 mentions), independence (15), discipline (14), drive and ambition (13), self-awareness (12), and positivity (10). Generally, participants reported that fulfilling these values contributed positively to their well-being: "The more they're fulfilled, the better I feel" (Julia). Interestingly, the values discussed most frequently related closely to the SDT factors

of relatedness, independence (autonomy), and competence. This indicates that participants not only perceived these contributors to well-being on a practical level but also integrated them into their value systems and priorities more abstractly.

In summary, our study found no meaningful differences in well-being levels between high-achieving and non-high-achieving students. However, competence was more crucial to the well-being of non-high achievers, while high-achieving students placed greater importance on autonomy. Additionally, achievement was a more prominent theme for high achievers, who viewed it as a practical measure of competence. Both groups reported that stress negatively impacted their well-being, but high-achievers experienced stress more frequently and had more extensive coping strategies.

Discussion

This study aimed to explore the general conceptualisations of well-being among university students (RQ1) and identify the differences and similarities in factors contributing to well-being between high- and non-high-achieving students (RQ2 & RQ3).

Regarding the first research question, our participants' conceptualisations of well-being provide practically grounded additions to existing theoretical models (e.g., Fraillon, 2004; Noble et al., 2008; Tay & Diener, 2011). Specifically, well-being was defined both positively, associated with daily functioning, happiness, satisfaction, and physical activity, and negatively, as the absence of stress, depression, anxiety, and physical and mental illness. Thus, our study revealed and confirmed the multifaceted image of well-being that Kiltz et al. (2020) suggested, further supporting their findings. Considering the definition of well-being in educational settings by Noble et al. (2008), which proposes well-being as "a sustainable state of positive mood and attitude, resilience and satisfaction with self, relationships, and experiences at school" (p.7), our findings extend it by adding the component of physical well-being.

Additionally, our participants frequently highlighted the negative aspects of well-being, which are overlooked in many definitions that focus primarily on its positive aspects (e.g., Fraillon, 2004; Noble et al., 2008; Ryan & Deci, 2001; Tay & Diener, 2011). While this focus

aligns with the framework of positive psychology (Seligman & Csikszentmihalyi, 2000), our study also reveals the importance of recognising detrimental factors. Specifically, stress emerged as an important factor influencing well-being negatively, and we consequently suggest that conceptualisations of well-being should account for it. Given the prevalence of stress in educational contexts and its impact on mental well-being (Slimmen et al., 2022), definitions, such as the one by Noble et al. (2008), should be expanded to account for the cognitive, emotional, and social resources needed to manage stressors. However, conceptualisations of well-being should not view stress as inherently opposed to well-being but rather as a functional response to life's challenges, acknowledging that managing stress effectively and "bounc[ing] back" from it (Kiltz et al., 2020, p.2) is essential. This understanding of dealing with stress effectively ties in closely with the concept of resilience (e.g. Mansfield et al., 2016).

Another component of well-being that our study revealed to be meaningful is balance. The concept of balance has been found to be relevant in many ways in previous research: first, the balance between different aspects of one's life, such as work or study and free time, as well as social life (Matuska, 2010; Sheldon et al., 2010). Second, internal balance, for example, between affective and cognitive states (Wallace & Shapiro, 2006), and third, balance between different aspects of well-being (Besika et al., 2021). In line with our participants' responses, we suggest that the various aspects of and contributors to well-being that have been discussed may not lead to its cultivation unless balance is established first. Balance may thus be understood as a precursor and necessary condition to well-being (Besika et al., 2021; see Figure 3, Appendix E).

Addressing the second and third research questions, our findings generally align with previous research, indicating no meaningful differences in well-being levels between high- and non-high-achieving students (Boazman et al., 2012; Bückner, 2018; Zeidner & Shani-Zinovich, 2011; Zeidner, 2018). However, consistent with Pollet and Schnell (2017), our findings suggest that the relevance and role of some of the seven key factors identified - autonomy, competence, relatedness, achievement, values, and stress (Figure 2) - may vary.

While both groups shared many common influences on well-being, differences emerged, particularly concerning achievement, autonomy, competence, and stress.

In line with previous research (e.g., Hirschle & Gondim, 2020; Slimmen et al., 2022), stress emerged as an important factor negatively influencing well-being across all participants. High-achieving students, however, were more specific in identifying sources of stress, particularly noting the lack of autonomy in managing program requirements as a major contributor. This suggests that while the effect of stress on well-being may be similar for all students, high-achieving students may be more familiar with stressful experiences. Consequently, they have likely developed more effective coping strategies driven by a greater need for them. Torrance (1966) suggested that this heightened awareness and coping ability may also stem from the tendency of high-achievers to seek out stressful experiences, and the causality between heightened awareness of coping strategies and stress-seeking should be investigated further. Thus, somewhat contrary to Pollett and Schnell's (2017) suggestion that high-achieving students may have unique stressors affecting their well-being, our study found that the stressors high achievers face do not necessarily differ per se but rather that they may experience the same stressors in larger quantities. However, the stress levels among both groups may eventually remain comparable due to heightened resources for coping among high-achieving students. This could relate to the theme of values, as high-achievers might integrate the ability to manage increased exposure to stress into their value system, developing effective coping strategies that buffer the detrimental impact of stress on well-being.

Relatedness was unanimously identified as a central contributor to well-being, both in and outside the university. This finding aligns with the emphasis on relatedness in SDT (Ryan & Deci, 2000) and supports previous studies on the importance of social support in academic settings (Turner, 1981). Contrary to the notion that honours colleges provide platforms for gifted students to integrate into a community of like-minded peers (Plominski & Burns, 2018), our participants generally indicated that they did not fulfil their need for

relatedness within the honours college. Instead, like non-high-achieving students, they found this connection through friends from their degree programs or outside academic contexts.

Therefore, while our findings suggest that relatedness is a primary factor contributing to well-being, meaningful connections and social support are more important than any specific platform where this connection is established. As the need for relatedness is similar for both high- and non-high-achieving students, well-being interventions should specifically target this factor (Gander et al., 2016).

Autonomy was another critical factor influencing well-being, with high-achieving students emphasising its importance more than their non-high-achieving counterparts. This aligns with SDT, which posits that autonomy is crucial for intrinsic motivation and well-being (Ryan & Deci, 2000). The greater emphasis on autonomy among high-achieving students may be linked to their heightened intellectual and motivational traits (Bergold et al., 2020). As suggested by one participant, for high-achieving students, competence may be linked more closely to autonomy than for non-high-achieving students, supporting a heightened need for achievement in the academic realm.

While experiences of competence were linked to well-being for both groups, the nature of this influence differed. Non-high-achieving students reported a more direct impact of academic competence on their well-being while high-achieving students discussed competence in conjunction with autonomy. The interplay between autonomy and competence suggests that feeling in control (autonomy) can enhance one's sense of competence, ultimately contributing to well-being. Our study thus extends SDT by suggesting the hypothesis that the needs of autonomy and well-being may not only contribute to well-being separately but also may be interlinked and thus influence each other.

Academic achievement had a mixed impact on well-being. While achievements could elicit feelings of happiness and pride, failures had a negative emotional impact, particularly for high-achieving students. This finding aligns with previous research indicating that high-achievers may experience heightened pressure and fear of failure, which was also illustrated by generally higher conceptualisations of achievement among this group (Neumeister, 2004;

Rinn & Bishop, 2015). The different conceptualisations of achievement, including high grades, understanding material, and receiving recognition, underscore the complexity of this factor and warrant further investigation. High-achieving students' stronger reactions to academic failures suggest that managing expectations and providing support for dealing with setbacks are crucial for their well-being. As proposed by some participants, academic achievements may, especially for high-achieving students, serve as a directly measurable operationalisation of competence. Thus, achievement and competence should not necessarily be viewed as entirely different domains, but instead, achievement could be interpreted as one manifestation of competence.

Values were generally mentioned as important for well-being. In combination with a potentially heightened importance on values such as discipline, conscientiousness, and achievement, the heightened contribution of achievement to competence as a contributor to well-being for high-achievers may be explained. Thus, we hypothesise that differences in values may fundamentally be responsible for a different connection between achievement, competence, well-being, and autonomy. Furthermore, the alignment of participants' values with the SDT factors of autonomy, competence, and relatedness indicates that students integrate these contributors into their broader value systems. This integration highlights the interconnectedness of practical and abstract aspects of well-being, suggesting that fostering environments that support these values can enhance overall well-being (Gander et al., 2016).

The limitations of this research include the subjective nature of qualitative research, which may lead to biased interpretations of the data, and the small sample size, which may limit the generalizability of our findings. Additionally, the deductive generation of survey questions means that we primarily gathered data based on the questions we asked, thereby potentially missing other relevant factors influencing well-being.

However, the qualitative approach allowed for a deep exploration of our participants' experiences, adding meaning to existing theoretical models. Specifically, this study provided a nuanced understanding of the complexities of high-achieving students' well-being, which

might be more challenging to achieve with quantitative methodology. Furthermore, the qualitative approach enabled us to investigate the conceptualisations and experiences of students' well-being, allowing us to expand the conceptualisation of well-being and propose novel relationships between its contributors. These findings should be further tested empirically to validate our research.

Based on our findings, several practical implications may benefit high-achieving students. As autonomy emerged as a crucial factor for these students, universities could offer a more flexible curriculum and enhance opportunities for independent study, such as independent research projects or internships where students can exercise control over their learning. To address the domain of relatedness, which is important for all students and may serve as a buffer against the heightened stress high-achievers face, interventions could include peer mentoring opportunities, encouraging participation in group projects to enhance collaborative skills, and providing resources for building a balanced social network.

Conclusion

This study explored the conceptualisation of well-being among university students and investigated components contributing to it for both high- and non-high-achieving students. Our findings lent support to the idea of well-being as a complex and multifaceted concept. Expanding on previous conceptualisations, we suggest including physical well-being, the impact of stress on mental well-being, and the concept of balance as critical components. Our findings furthermore reinforce the relevance of SDT for understanding well-being (Ryan & Deci, 2000). Examining the different needs contributing to the well-being of high- and non-high-achieving students, we proposed a potential adaptation of the SDT model for high-achieving students, involving a connection of autonomy and competence through achievement. Specifically, high-achieving students may place greater value on achievement, making it more central to their experiences of competence and autonomy and, thus, more important for their experience of well-being. Thus, despite the limitations of our qualitative approach, our findings generated promising hypotheses for future research. Our findings thereby underscore the importance of supportive academic environments that address basic

needs and foster autonomy, competence, and relatedness, with diverse conceptualisations of well-being suggesting that tailored programs should be designed to meet student's specific needs effectively.

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Appendix A

Demographic Information of Participants

Demographic Characteristics	Distribution	
	n	%
Gender		
Male	6	50
Female	6	50
Prefer not to say	0	0
Nationality		
Dutch	4	33
Other	8	67
Year of Studies		
First	4	33
Second	1	8
Third	6	50
Fourth	1	8
Honours college		
Participating	5	42
Not Participating	7	58
First-Generation Students		
First-Generation	4	33
Continous-Generation	8	67

Appendix B

Interview Script

Introduction	Questions
Conceptualisation & Experience of Well-Being	
Warm-up, ...	<p><i>I am interested in how you experience your life at university.</i></p> <p>How have you experienced your studies so far?</p> <p><i>Bridge: in this first part I would like to broadly find out what well-being means to you, and general things that might contribute to it.</i></p>
Basic needs	<p>What needs outside of academia need to be fulfilled for you to feel good in university?</p>
Conceptualisation of well-being	<p><i>In general, what does well-being mean to you?</i></p> <p>follow up: More specifically, how do you understand well-being in academia?</p>
Perception/experience of well-being	<p>How would you describe your own experience of well-being in academia?</p> <p><i>If first gen: you put in the questionnaire you're a first-gen student. These next two questions are focused on that</i></p> <p><i>Not first gen: A potential factor contributing to well-being is working besides your studies.</i></p>
Experiences of First-Gen Students	<p>Only to first-gen students:</p> <p>As a student whose parents do not have a university degree, how was your experience entering the academic world?</p> <p>Did you receive any support and by whom?</p>
Workload	<p>Do you (have to) work besides your study? How does this work out together with your studies?</p>
<p>Specific Factors SDT: <i>Now we're diving into the more specific factors that might contribute to well-being.</i></p>	

- Autonomy
- How much do you feel your studies are driven by your own choices and preferences?
- follow up: How does feeling in control of your studies contribute to your experience of well-being in university?
- if third year: When comparing your experiences in your first and your third years, how has your sense of agency and control of your studies evolved?*
- (potential follow-up: Could you elaborate on any changes you've noticed?)
- Relatedness
- How would you describe your experience of feeling connected to your peers in your studies? And with teachers? (*make sure they talk about both*)
- follow up: How does the feeling of belonging and relatedness contribute to your experience of well-being in university?
- if third year: How has your sense of belonging/feeling connected to your peers evolved throughout the years of your study programme? (potential follow-up: Could you elaborate on any changes you've noticed?)
- Competence
- How competent do you feel in managing the requirements and tasks of your degree?
- follow up: How does the feeling of competence contribute to your experience of well-being in university?
- if third year: How has your feeling of being competent to fulfill the requirements of your degree evolved over the years of your study programme? / (potential follow up: Could you elaborate on the progression of your confidence and abilities in handling academic tasks from your first year to now?)
- Further Concepts: *Now that we talked about specific factors, let us move on to some other concepts that potentially contribute to your well-being*

Values/ Meaning	<p>What are general values you find important in life?</p> <p>Which values do you try to follow in your academic pursuits? <i>(if they have difficulties answering: What are your goals in life/in your studies? What makes you want to pursue these goals?)</i></p> <p>follow-up: How does the fulfillment of these values affect how you feel?</p>
Influence of Achievement on Well-Being (= one example of what people value)	<p><i>Let us now move on to talk about the influence of academic achievement on well-being</i></p> <p>What, to you, is high achievement in academia?</p> <p>How important are academic achievements to you? follow up: What makes you think that way?</p> <p>How do your academic achievements affect your well-being? (or have affected it in the past)</p> <p>For HC students: What was your experience of participating in the honours college? follow up: How did participating in the HC affect your well-being during your studies?</p>
Resilience and Stress, Resources & Coping	<p><i>We will now talk about your experience of stress in university.</i></p> <p>Could you think of a time when you were stressed:</p> <p>How did you deal with the stressor?</p> <p>follow up: How did this experience affect your well-being?</p> <p>follow up: How do you get back on your feet after stressful experiences?</p> <p>optional: How do you manage your well-being during your studies? (Can you name a few examples?)</p>
Intervention ideas/organizational change:	<p><i>To close, I want to quickly talk about changes that you feel could improve your well-being</i></p>
intervention ideas/organizational change	<p>What does the university currently do to facilitate student's well-being?</p> <p>How accessible do you find this support?</p> <p>What can the university do more to enhance student well-being?</p> <p>Thinking of what we talked about before, the feeling of being in control, connected and competent: Can you think of specific</p>

interventions or improvements that would help you in that regard?

What life circumstances could change to help you with university life?

Finish

Thank you for sharing your experience with me.

Is there anything that you would still like to mention before we end the interview?

Thank you very much for participating! I would like to end the interview here. If you, for any reason, do not want your data to be used in our study feel free to let us know at any point, either now or via email. If you experience any distress concerning our conversation today, please reach out. We have a trained psychologist at hand and want to make sure that you do not experience any distress in relation to our research. Thanks again and have a great day.

Appendix C

Informed Consent for Interview Study within the Project: Understanding Well-being in Academia through Self-Determination Theory (SDT)

April 2024

I, [Participant's Name], hereby consent to participate in the current research conducted by [Researcher's Name], a student at the University of Groningen. Contact: [Researcher's Contact Information]

I have agreed to participate in the study "Understanding Well-being in Academia through Self-Determination Theory (SDT)," understanding that my participation is entirely voluntary. I acknowledge that my data will be kept confidential. I reserve the right to withdraw from this study at any time without penalty and to request that my responses not be used. The researcher is responsible for the secure storage of the data.

I will have the opportunity to review a summary of my interview and indicate whether I wish particular parts not to be considered in the analysis. The data will be only used for educational purpose and will not be published.

I read and understood the information form, which provides more detailed information about the research.

Date: [Participant's Date]

Signature Participant:

Date: [Researcher's Date]

Signature Researcher:

Appendix D

Code Book

Code	Definition	Sample Quotes
Basic Needs		
Housing	Participants described the need for shelter that provides safety and comfort	<i>"I need to have a good place where I live, where I feel comfortable." (Mai)</i>
Food	Participants emphasised the need for nutritious food to maintain energy and motivation	<i>"If I eat good food, then I am more likely to sit down and study." (Sophie)</i>
Sleep	Participants highlighted the need for adequate rest to ensure proper functioning	<i>"Sleep for me is very important. If you're not well rested, obviously you're not gonna recollect anything." (Sophie)</i>
Safety and Security	Participants emphasised the need for financial security and a safe environment	<i>"I need to have enough money to buy food and drinks." (Mai)</i>
Belonging/Relatedness	Participants underscored the need for interpersonal relationships and being a part of the group	<i>"Outside academia, I need some friends to talk to, to hang out with." (Robert)</i>
Routine	Participants talked about the need for a structured schedule that provides consistency	<i>"My day-to-day can look very similar, I enjoy getting into a good routine." (Kiran)</i>
Free/Leisure Time	Participants emphasised the need for activities for relaxation and enjoyment	<i>"I need a little bit of outside life, hobbies, like doing sports." (Nina)</i>
Conceptualization of Well-being		
Comfort	Participants spoke about finding oneself in a pleasant situation	<i>"I need to have a good place where I live, where I feel comfortable" (Manaia)</i>
Satisfaction	Participants talked about a general state of contentment with one's life	<i>"I think it's to a large extent being satisfied with what you're doing" (Andrey)</i>

Code	Definition	Sample Quotes
Happiness	Participants named happiness as a positive mental state, often named in combination with well-being	<i>"Well-being in general, I think it means that how you feel, like if you feel good, if you feel happy, its well-being" (Robert)</i>
Physical Well-Being	Participants described physical well-being a state in which one is free from disease and is getting adequate exercise	<i>"I think it's important to stay active, I play football at a club and if for some reason I haven't been training (...) it does have an effect on my mood" (Kiran)</i>
Values and Well-Being	Participants described the importance of fulfilling their values to in order to feel well	<i>"I feel like when I don't fulfill those (values), (...) I feel like it negatively influences me" (Mai)</i>
General Balance	Participants expressed the importance of having a proper balance between the challenges of academia and their personal lives	<i>"If I take too much too much classes then I get really stressed and then I don't really have life outside of school anymore and then my mental health goes bad" (Nina)</i>
Holistic Well-Being	Participants described well-being as a combination of many different factors, most often mental and physical well-being	<i>"I would say well-being means to me that I feel physically and emotionally healthy, and I can do things that I want to do and that I'm not limited" (Mai)</i>
Perception/Experience of Well-being		
Positive Well-Being	Participants describe an experience of positive well-being	<i>"I think I'm a very content with my, with my life at the moment, and then I wouldn't say that there's a situation that can change that would make me feel better now" (David)</i>
Negative Well-Being	Participants described an experience of negative well-being	<i>"Especially if there's a high workload. (...) then I don't have a lot of well being because I don't like what I'm doing." (David)</i>
Satisfaction with Uni Positive	Participants described being satisfied with a	<i>I could easily go to study advisor or something like that. It makes them very</i>

Code	Definition	Sample Quotes
	certain aspect of the university	<i>approachable. So that that's, that's the main thing to be "proud of" (David)</i>
Satisfaction with Uni Negative	Participants described being dissatisfied with a certain aspect of the university	<i>"So, I honestly don't really feel like the university is doing that many things to enhance my well-being" (Mai)</i>
Well-Being Development	Participants described how their well-being has developed during their studies	<i>"I think the first year was really the hardest emotionally, I studied a lot. The second year I started to be more chill about it" (Andrey)</i>
Autonomy		
Autonomy Positive	Participants defined autonomy as having control over their workload	<i>"If I feel like I have everything in control, I'm managing my deadlines on time, I feel like everything's going well." (Lisa)</i>
Autonomy Negative	Participants defined it as a lack of control over their academic endeavours	<i>"In the second year, I always felt like I was not on top of my material, so as a result, I was never in control." (Sophie)</i>
Autonomy Development	Participants talked about progressively gaining more control over their academic journey progressively throughout their studies	<i>"I think at the beginning I was really overwhelmed... Now I feel like I got the hang of it, and I know what I need to do and what's expected of me." (Mai)</i>
Autonomy Support	Participants about the impact of autonomy-supporting university structures on their sense of autonomy	<i>"I have the autonomy to fill in quite a lot of things for myself. And it makes it very enjoyable, very motivating to do". (David)</i>
Autonomy and Well-Being	Participants talked about the impact that a sense of control and agency had on their well-being	<i>"If I feel like I am in control and I can manage everything myself, I think that does positively influence my well-being." (Mai)</i>
Competence		

Code	Definition	Sample Quotes
Competence Positive	Participants defined competence as being able to succeed in their tasks and goals	<i>"This year, I'm trying to do 75 points in one year and for now I'm on track, so that makes me feel really competent". (Nina)</i>
Competence Negative	Participants defined it as struggling to succeed in their tasks	<i>"I'm not really good at managing the stuff for university". (Robert)</i>
Competence Development	Participants defined it as progressively becoming more self-efficient and confident in their abilities	<i>"I did become a lot more secure in my own ability to study, to effectively tackle problems in comparison to the first year." (Sophie)</i>
Competence and Well-Being	Participants talked about the impact of perceived competence on their well-being	<i>"I see myself as able to do the things that I have to do. It contributes to my well-being." (David)</i>
Self-Esteem	Participants talked about having a positive sense of self-worth	<i>"And this way, I can be more my authentic self, be more assertive as well, because I respect my needs." (Lisa)</i>
Self-Confidence	Participants defined it as a belief in their abilities	<i>"I know that if I would try something completely different, I kind of feel like I would still get a good grade in the end." (Bart)</i>
Impostor Syndrome	Participants talked about feeling inadequate and uncertain about their abilities compared to their peers	<i>"I think I felt like it's so hard to pass anything and am I even smart enough to do this? Is it where I belong?" (Mai)</i>
Relatedness		
Relatedness Negative	Participants experience a lack of connection to their peers, family and/or studies	<i>"I'm not very connected to my peers in my studies to be honest, like since I changed my bachelor there's yeah a couple of guys there that I do some projects with but I don't talk to anyone there outside of school." (Kiran)</i>
Relatedness Positive	Participants describe a fulfilling and meaningful interpersonal relationship	<i>"Some friends here, yeah. But I mostly talk to my friends back home, that I have for life. And also my</i>

Code	Definition	Sample Quotes
Relatedness Development	with their friends and/or family Participants describe how their relationships have developed over the years within their bachelor studies	<i>parents are really helping me with situations like this because they also went through kind of the same thing” (Robert)</i> <i>“First and second year, we were spending like, every day, the whole day together, like, and now it’s really, maybe on the weekends, or if we have time then or like in between classes or something... especially this year, I have, like some of my friends I haven’t seen at all, but nowhere near as much as compared to the previous years” (Andrey)</i>
Relatedness and Well-Being	Participants experience how connections with people influence their perceived well-being	<i>“It’s positive for me. We hang every week and it just helped me because then we can talk about things and just relax together” (Nina)</i>
Family/Partner Support	Participants talk about their experiences of support from their family or life partners.	<i>“I also have like, my partner is also, uh, finishing up their degree right now. So that’s also, that’s also really helpful. Like when I’m feeling stuck, then I talk to her and then she kind of gets me out of it again” (Bart)</i>
Peer support	Participants talk about the importance of a trustworthy and reliable peer support network	<i>“Like I said, the UCG, so my faculties, the community, the community is very tight-knit and they’re very supportive of each other and the teachers as well. They’re very close with the students, so it’s a really nice environment to be in honestly. (Manaia)</i>
Teacher support	Participants’ perception of the teacher’s willingness to aid students in their academic journey.	<i>“A very important factor is that I, at least for me, is that I can go at the end of the lecture and ask the professor questions that I have, and then they answer” (Sophie)</i>

Code	Definition	Sample Quotes
Teacher Relatedness Positive	Participants recall positive experiences with teachers in which they could relate to them	<i>"With the teachers? Well, compared to what I've had before, they're super, super engaging. They're very calm, but that also might be because we're in uni, so I guess they treat us more like adults here or something" (Manaia)</i>
Teacher Relatedness Negative	Participants recall unpleasant or alienating experiences with teachers in which they could not relate to their teachers	<i>"I feel like we didn't have that much close contact with teachers, and I can, I don't know, reflect on it, because I think a lot of times it was also just other students that taught practicals" (Mai)</i>
Community	Participants stress the importance of a sense of community. A network of people one can rely on and seek emotional support from if needed.	<i>"Well, we all live in the same building, actually. So we're very, very close, I would say. They're very easy people to talk to. Obviously, there's groups here and there, but usually they're really easy to enter, like the groups and friends of different people across the years as well" (Manaia)</i>
Dealing with Stress		
Communication/ Relatedness	Participants reported talking with peers or family as a method of dealing with stress	<i>"Now it's more communicating with people, because, like I said, people here are a lot more open-minded and more willing to talk about, like, issues and problems" (Manaia)</i>
Art	Participants reported creating art as a method of dealing with stress	<i>"I also like to use my poetry a lot." (Manaia)</i>
Solitude	Participants reported spending time alone as a method of dealing with stress	<i>"And also spend time just by myself or just go for a walk by myself. Or just have a day where I'm alone. I think that's very helpful" (Lisa)</i>
Stress avoidance	Participants described avoiding stress as way to cope with stress	<i>"I was just like, I don't have time for this. I don't have</i>

Code	Definition	Sample Quotes
		<i>time to stress over it.” (Sophie)</i>
Mindfulness/Meditation	Participants reported the use of meditation or a focus on mindfulness with as a method of dealing with stress	<i>“I like mindfulness. I don't know, I meditate a lot” (Julia)</i>
Solution-Focused coping	Participants reported taking action against stressors as a method of dealing with stress	<i>“So going to the library and then having stress is OK and just working through it and then when I get home then I'll just relax again” (Nina)</i>
Reframing	Participants reported taking a new stance on stressors as a method of dealing with stress	<i>“I can see it in in the in the context, and I can see okay, well, I'm feeling shit now. But you feel horrible every once in a while. That's also what makes you able to feel good. So and yeah, I've been able to deal with it more” (David)</i>
Physical activity	Participants reported being physically active as a method of dealing with stress	<i>“I did go sometimes on some walks throughout the city at night, uh, for like one hour, two hours with just my headphones and my thoughts alone and that was rather nice, rather refreshing” (Sophie)</i>
Being outside	Participants reported spending time outside or in nature as a method of dealing with stress	<i>“Uh lately (...) or going on a walk.” (Andrey)</i>
Time management	Participants report preventing stressful situations by making use of effective time management	<i>“I definitely manage organizing myself, especially during exam season. I have a schedule which I follow like example coming up so I can manage my time effectively” (Najeeb)</i>
Stress Others		
Positive/ functional stress	Participants describe a stressor as functional or positive.	<i>“if I'm not stressed at all, I feel like I'm not doing the right thing. I feel like I'm not doing that much.” (Najeeb)</i>

Code	Definition	Sample Quotes
Negative effects of stress	Participants speak about the negative impact of stress	<i>"I'm really overwhelmed by the stress, and I really don't know what to do. I oftentimes can't really do any more work after that for the rest of the day, or for a couple of hours."</i> (David)
Stress and well-being	Participants describe the relationship between the experience of stress and feeling well in academia	<i>"I was so like mentally drained, like under stress that I didn't, couldn't even study."</i> (Sophie)
Resilience	Participants describe their ability to withstand stressors	<i>"then just communicated (the stressor) with some of my friends here. There's really nothing hard to get rid of."</i> (Manaia)
Uni Workload Positive	Participants experience the university workload as manageable or realistic	<i>"Yeah, only positively because the workload was not quite a lot extra. But I did get the advantages."</i> (David)
Uni Workload negative	Participants experience the university workload as unmanageable or unrealistic	<i>"I had my quantum physics exam on Thursday and then an exam next Wednesday. And then I only had four days to study"</i> (Sophie)
Pressure to perform/Fear of failure	Participants experience stress to achieve certain results within their studies	<i>"In my second year, I just always felt like I'm underperforming. Although, like on paper I really wasn't. But I had this state of mind that everything is going bad"</i> (Sophie)
Absence of Stress	Participants report to experience no stress at all	<i>"Everyone knows that I don't stress as much because I know that I'm going to study, do my best and hope for the best"</i> (Najeeb)
Time pressure	Participants report feelings of stress because of deadlines or upcoming exams	<i>"I would say right now I'm probably like the most stressed that I've been in my stuies so far, because a lot of really important, stuff is coming up"</i> (Bart)

Code	Definition	Sample Quotes
Conceptualising Achievement		
Importance of Grades	Participants highlighted the importance of grades, discussing their impact on academic goals, self-esteem, and future opportunities.	<i>"I think talking about high achievement would be for me to pass everything without having any resits, and ideally passing with a good grade." (Mai)</i>
Comparison with Others	Participants compared themselves with others, reflecting on their relative academic performance and achievements.	<i>"I'd say that it's all about (...) grades relative to peers." (David)</i>
Fulfilling Expectations	Participants described their experiences with fulfilling expectations, including academic, personal, and external standards.	<i>"I just automatically expect that I can get everything done." (Julia)</i>
Recognition	Participants discussed the recognition they received for their achievements, including praise from peers, family, and faculty.	<i>"The words of my teachers. Their 'words, those they make me very happy. Vividly sometimes I remember their feedback." (Lisa)</i>
Achievement as a Tool	Participants viewed achievement as a tool for advancing future goals and gaining novel opportunities.	<i>"For me, grades don't have an inherent value. It's just a tool to get to where I want to get." (Julia)</i>
Effort	Participants emphasized the role of effort in achieving success, highlighting the importance of hard work, perseverance, and dedication.	<i>"You can get a good grade without working hard (...) but like high achieving actually working on what you're doing and even if you don't get a good grade, at least you know what you did is your best so you would be happy about it." (Najeeb)</i>
Understanding	Participants emphasized the importance of understanding concepts deeply, rather than merely passing or getting high grades.	<i>"Really understanding everything is probably the most important thing in academia" (Andrey)</i>
Achievement (Other)		

Code	Definition	Sample Quotes
Importance of Achievement	Participants underscored the importance of achievement as an indication of personal progress, academic success, and future opportunities.	<i>"For me are important because if I don't have these achievements, if I don't pass all the courses, then I will not be able to continue next year here." (Robert)</i>
Importance of Achievement Negative	Participants indicated that achievement was not very important to them.	<i>"High achievement isn't really that important for me." (Nina)</i>
Achievement Expectations	Participants discussed their perceptions and experiences regarding achievement expectations, including internal and external pressures .	<i>"I feel like if I don't fulfil those things then I feel like I'm not as capable or competent or I'm not doing those things that I should be doing." (Mai)</i>
Honours College (HC)		
HC Content	Participants discussed the content of the honours college program, such as coursework and learning experiences.	<i>"Maybe in honors, I think there are some courses that have very strict structure." (Lisa)</i>
HC Relatedness	Participants described a sense of relatedness and connection within the honours college.	<i>"I think we can comfort each other a lot because we're going though similar things. Especially in honors because the sense of pressure is really there" (Lisa)</i>
HC Perceived Advantages	Participants identified perceived advantages of the honours college program, such as enhanced academic opportunities and personal growth.	<i>"We also get extra classes" (Sophie)</i>
HC Satisfaction Positive	Participants expressed positive satisfaction with their experiences in the honours college program.	<i>"It was a bumpy road but I'm glad I did it. That's what I tell everyone when they ask me about honors." (Lisa)</i>

Code	Definition	Sample Quotes
HC Satisfaction Negative	Participants expressed a lack of satisfaction with their experiences in the honours college program.	<i>"Overall, I wouldn't say it's very useful personally."</i> (Andrey)
Values and Well-Being		
Autonomy (value)	Participants emphasized the importance of autonomy as a value, used to guide them through university	<i>"For me to be able to, uh, be confident and like the university experience, I really, really need to be in control"</i> (Sophie)
Conscientiousness	Participants explain the importance of being responsible, careful, and diligent	<i>"Being organised, beginning on time, learning throughout the block as well."</i> (Nina)
Discipline	Participants describe discipline as the way to do what needs to be done	<i>"But yeah, just be determined to complete what I started, and then get on the path that I wanted to get on eventually, and just stick to that, basically."</i> (Manaia)
Drive/ambition	Participants see drive/ambition as motivation to achieve greater things	<i>"So I think also like keep taking that kind of risk, like of potential failure or potential success is, uh, for me also a big, pretty big one to like, keep it a bit more interesting for me."</i> (Bart)
Effort/hard work	Participants emphasize the extent of work one is putting in	<i>"Yeah, just like trying your best or doing it even if you don't like it. You know, I think that's part of well-being in this context."</i> (Andrey)
Independence	Participants express the need for freedom from the control, influence, or like of others	<i>"You see what you can do better and, sort of taking charge in your life like that. Not try to let I don't know outside factors or other people influence you too much. You take charge of what you want to do how you want to do is, you know."</i> (Kiran)
Self-Awareness	Participants understand self-awareness as the ability to understand your	<i>"And this way I can be more my authentic self and maybe yeah, be more assertive as</i>

Code	Definition	Sample Quotes
	one's own thoughts, strengths, weaknesses, and beliefs	<i>well, because I respect my needs. And then I feel like the cooperation with other people is also great on the professional level or personal" (Lisa)</i>
Being perceived as a person	Participants believe that there should be an appreciation of people seeing them as who they are	<i>"“(...) when I would feel that people who are around me, or, or maybe my supervisors, or bosses kind of care about my mental state, or well being apart from my academic performance. So they kind of acknowledged me as (...) a human who can have breakdowns or personal failures or feel pressured, or overwhelmed.” (Lisa)</i>
Career	Participants view career as a value in terms of components that define their professional career	<i>"I think I'm what I want to get out of the study is to get a job that I really like. And a job that really doesn't stress me and that i love for years and years. So I think that's the goal." (Nina)</i>
Caring for others	Participants believe that one should have the ability to be empathetic and be able to connect to others	<i>"Second of all, a very important thing for me is if somebody asks me for help, I help them because I feel like if I wanted to know something and I went to ask somebody, I would very much like if they would answer me rather than ignore me. So I feel like it's a very important thing that when somebody asks me, I answer the question. So I put a lot of value on that." (Sophie)</i>
Relatedness (values)	Participants value and believe that one needs to belong	<i>"The most important part for me was finding a group of people and then like, you know, them help you helping each other out Yeah. Rather than university really stepping up. So that's how I</i>

Code	Definition	Sample Quotes
		<i>experienced my studies study so far.” (Sophie)</i>
Contribution	Participants understand contribution as the belief that one is able to help and develop a sense of purpose in life	<i>“Teaching just really, really makes me happy. Mm-Hmm. So, uh, answering any questions, lovely stuff. Mm-Hmm. um, especially when, like, for example, in the past two months, uh, now that we're at the end, and also now that we really sort of know each other in our cohort.” (Sophie)</i>
Self-care	Participants understand the importance of taking time to do things that help and improve both your physical and mental health	<i>“Having time to keep everything clean, like not necessarily clean or anything like ordered and everything in my house, like making sure everything's you know how it's supposed to be” (Andrey)</i>
Positivity	Participants view positivity as the belief that one should hold a positive attitude to cope with adverse situations	<i>“I think you need to be positive in every situation. You don't need to... If you, if you hear bad news, you don't need to feel like the world is ending for you. And you don't need to you, don't have to do it. You just need to ... I don't know how to say. You just need to” (Robert)</i>
Personal growth	Participants define personal growth as being involved in becoming more aware of ourselves, and having the will to grow into the person we want to be	<i>“Because even like, even if some stuff is difficult, if not too many things, like if a limited number of things are difficult, then then once you are able to do them, at the end of the day, you feel better than if everything was very, very easy. Right? So I think having some difficult stuff that makes you feel incompetent, is also good” (Andrey)</i>
Purpose/meaning in life	The participants belief that one should have a sense	<i>“I wanted to be able to contribute to society, I'd say If that makes it it's not</i>

Code	Definition	Sample Quotes
	of meaning and direction in life	<i>necessarily making a lot of money or anything. That's that's that's. That's a little less interesting to me.” (David)</i>
Knowledge	The belief that educating oneself sufficiently is important in order to make correct decisions in life	<i>“Obviously that's not gonna be that much beneficial in the long run. Mm-Hmm. Uh, when you go into PhD, professorships, whatever you do specialize in one topic. But I think if you want to still specialize in one topic, it's very important that you have a background in a lot of different things” (Sophie)</i>
Interventions		
Satisfaction with Uni Positive	Participants describe their pleasant experiences within the university environment	<i>“Diversity, especially for this course. For me, academia is not really about just studying and then passing your exams. I really like to learn what I'm learning, and that's why I like the diversity of my course, specifically” (Manaia)</i>
Satisfaction with Uni Negative	Participants give a negative evaluation and show general discontent towards the university	<i>“Yeah, I feel like I have no relationship with the university. I just go to just go back home and not think about university at all. Yeah, like it's completely different than when I was in school where I actually had a good relationship with my school” (Najeeb)</i>
Accessibility of Support Negative	Participants talk about multiple services provided by the university to aid students in fostering and maintaining their well-being	<i>“Over the years I kind of learned how academia works and what are the roles and the functions. The teachers, the study advisors. I also, along the way, I learned how to ask for help, or support. I also did the student service psychologist session.” (Lisa)</i>

Code	Definition	Sample Quotes
Accessibility of Support Negative	Participants describe negative experiences with support services provided by the university	<i>"I don't think it's really that accessible because I've heard of a friend of mine who also applied for the student psychologist and they had like a wait time of two to three months at that time."</i> (Nina)
Respect for Student's Opinion	Participants feeling of their voice/opinions being heard and considered by university staff	<i>"And even after like multiple complaints, and when we have like the second level of this course, in the second year, they didn't take our complaints into account and they just copy pasted the same three pages of the mental health"</i> (Sophie)
Positive Learning Environment	Participants' idea of a safe and nurturing learning environment	<i>"I need a safe environment to be who I want to be. In a sense that I can share my ideas, share my critique, share my passion about things without feeling that it's frowned upon or not wanted."</i> (David)
Interventions Relatedness	Participants talk about how the university could foster a more supportive environment fulfilling the need for relatedness	<i>"I think like in the first year you have a student mentor and faculty mentor, I think if that's a bit in a background as well for the second year, I think that will help, because in the first year I had a great student mentor and she really helped me with managing expectations and that like type of stuff. I think it would be great if something like that would be accessible for the second and third years if you wanted."</i> (Nina)
Interventions Autonomy	Participants talk about how the university could foster a more supportive environment fulfilling the need for autonomy	<i>"I think I can't think of something specific apart from what we're doing now. I guess just the individual approach of teachers. That they can like recommend and maybe teach us guidelines from the</i>

Code	Definition	Sample Quotes
Interventions Competence	Participants talk about how the university could foster a more supportive environment fulfilling the need for competence	<p><i>organizational perspective. Where they give lessons and teachings.” (Lisa)</i></p> <p><i>“At the start of the year, the courses that we got weren’t like run mainly by the teachers. They were by the TAs, which are students. So the students like us first years, they couldn’t manage to understand what’s happening because the teacher isn’t actually the one lecturing us... So yeah, teachers should have a more role in our courses I believe.” (Najeeb)</i></p>
Awareness of Interventions by Uni	Participants awareness regarding interventions provided by the university to improve students’ mental well-being	<i>“The only thing that I know of is the student psychologist, but further I don’t really know that the university does anything. Maybe it’s because I don’t know.” (Nina)</i>
No Perceived Need for Interventions	Participants’ opinions on whether interventions by the university are necessary or not	<i>“But I think in my life at least that’s the furthest that the university goes to do anything, you know. I think for well-being and things like that. You don’t go to your university, right? You talk to your friends. You talk to your parents, you do something like that. So, yeah, I also don’t really think it’s the universities role to take care of students too much outside of class.” (Kiran)</i>
First-Generation Experience		
Family/Partner Support	Participants’ perception on support by their family or partner	<i>“Well, yeah, I received a lot of support from my mother. Definitely. Well, of course, my grandparents as well, because it is a prestige thing.” (David)</i>
Financial Situation	Participants mention or talk about their financial	<i>“And now, I mean, my parents are there to talk and</i>

Code	Definition	Sample Quotes
	situation, implicitly or explicitly	<i>they support me emotionally, but they cannot support me financially, so I don't get any money from them.” (Mai)</i>
Hidden Curriculum	The hidden curriculum in academia describes a covert set of expectations or values that are not explicitly taught but gives an advantage to those who inherit the values, norms and beliefs of mainstream society, predominantly upper and middle-class (Kentli, 2009). The code was applied whenever participants mentioned aspects that fitted in the concept.	<i>“A lot of them are like children of lawyers or this very kind of high institutional. High class... There you can see their childhood has been very educated and they've been kind of brought up for that knowledge. So you can see they're intelligent. Because they have it in their genes.” (Lisa)</i>
Alienation/Perceived Differences	Suited for first-generation students, when they mention alienation or differences because of their first-gen status	<i>“I do feel connected to them, but I also definitely see differences. And I think we also have different opinions about certain things.” (Mai)</i>
Society's Expectations	First-Generation Students talk about how they perceive expectations of society influence their experience	<i>“I do think that there's just a bit more of a social pressure on studying.” (Bart)</i>
Wage Labour		
Job yes	Applied if participant reports having a job	<i>“I work as a teaching assistant.” (Sophie)</i>
Job no	Applied if participant reports not having a job	<i>“No, I don't [work], unfortunately.” (Manaia)</i>
Job Experience Positive	Participants experience their job positively	<i>“Yes, I do not really have to work besides my studies. But I do because I like it. And it gets a little extra money, of course, nice.” (David)</i>
Study/Work Balance Positive	Participants evaluate positively how studying	<i>“So how I manage it... I have it really packed but I have like the physical cleaning job</i>

Code	Definition	Sample Quotes
Study/Work Balance Negative	and working in a job goes together Participants evaluate negatively how studying and working in a job goes together	<i>is like regular. And then I have those other jobs which are kind of freelance or I can plan and randomly or put it in the free spot that I have in my day. So it's quite flexible.” (Lisa)</i> <i>“It's just annoying 'cause you just got, uh, especially now in like writing the thesis and like making the end work, it just takes up so much time.” (Bart)</i>
Job Ideation Positive	Whether participants had a job or not, the code refers to participants' positive attitudes towards a job and how they ideate it.	<i>“I do want to work. I think it's an important experience to have to be able to be independent and manage everything. I don't think it would add that much to my workload, honestly.” (Manaia)</i>
Job Ideation Negative	Whether participants had a job or not, the code refers to participants' negative attitudes towards a job and how they ideate it.	<i>“If you know for people who who actually really need the money and who are working a lot and you know probably overworking then I think at that point negative.” (Kiran)</i>

Appendix E

Figure 1

Components of Well-Being Conceptualized by Participants

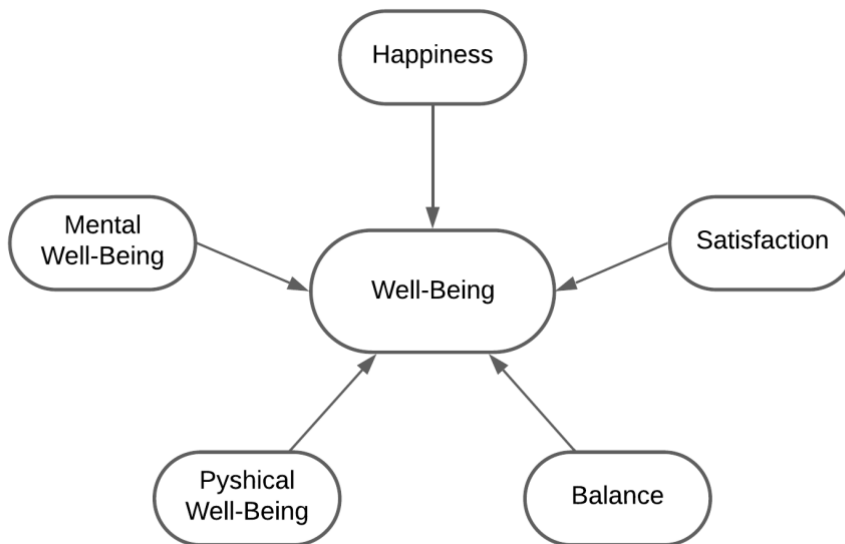
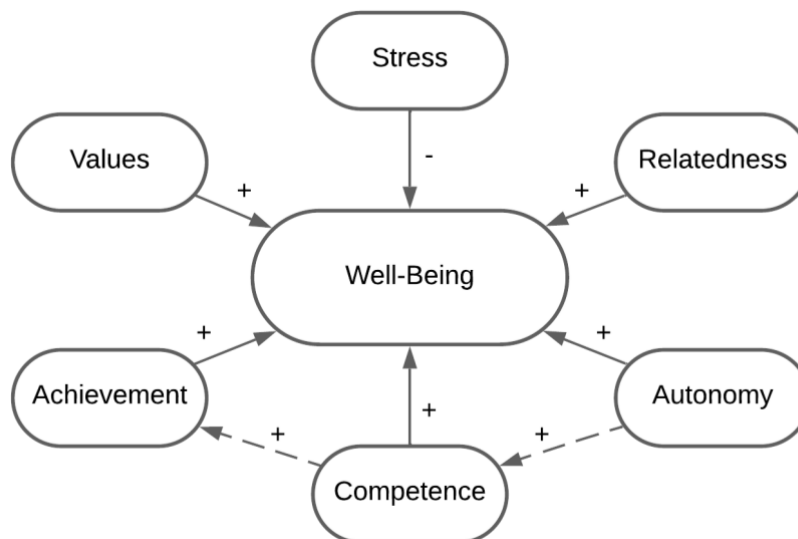


Figure 2

Components Influencing Honors and Non-Honors Students' Well-Being

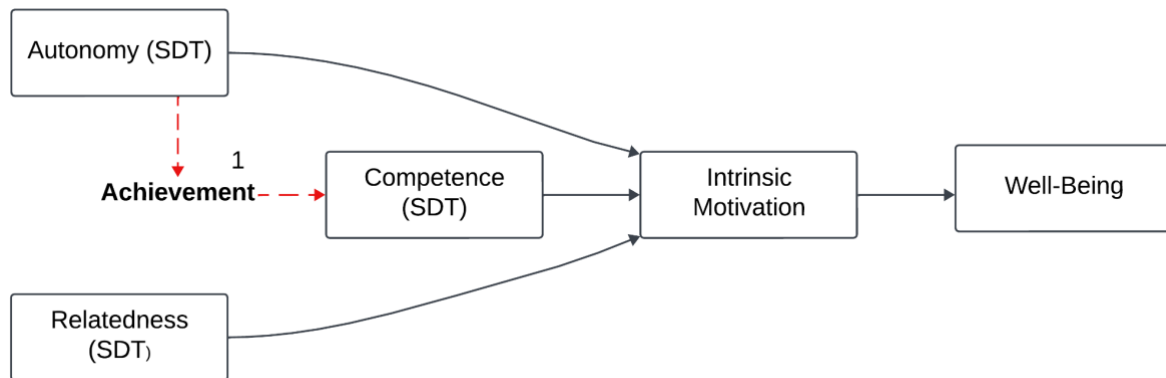


Note: The figure shows components affecting well-being for Honors and Non-Honors participants. "+" indicates a positive impact, and "-" indicates a negative impact. The dotted line between autonomy and competence represents participant Sophie's theorizing that greater autonomy may enhance competence. The line between competence and

achievement suggests these factors are linked, with academic achievement seen as a representation of competence.

Figure 3

Overview of Hypothesized Relationships Between Factors Contributing to Well-Being



Note: The red dotted arrows indicate the hypothesized relationships based on our participants' responses: (1) Autonomy may be linked to higher achievement for honors students, which in turn leads to higher competence.