Exploring Students' Experiences of Engagement and Cognitive Congruence in Student Mentors and Faculty Mentors: A Qualitative Analysis

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Abstract

This research investigates students' perspectives on student mentoring in higher education, focusing on the influence of cognitive congruence on mentoring success. The study examines qualitative differences in cognitive congruence between student mentors and faculty mentors, as well as the impact on affective and behavioural engagement. Twelve semi-structured interviews were conducted with first-year psychology students at the University of Groningen enrolled in the 'Academic Skills' course which is taught by both mentor types. The interviews were analysed and common themes relating to cognitive congruence and affective and behavioural engagement were identified. It was found that there are indeed qualitative differences, with students describing high levels of cognitive congruence in their student mentors. Participants reported high affective engagement with student mentors. Both mentor types were described to have positive effects on behavioural engagement, with student mentors encouraging participation and faculty mentors promoting increased effort. Overall, the findings are in line with previous studies reporting higher cognitive congruence in student mentors. However, participants did not necessarily see that as an advantage since the faculty mentors higher subject matter expertise and greater authority were also seen as helpful. Therefore, using approaches that combine teaching by faculty mentors and student mentors may lead to the best outcomes for students.

Keywords: student mentoring, cognitive congruence, affective engagement, behavioural engagement, qualitative analysis

Exploring Students' Experiences of Engagement and Cognitive Congruence in Student Mentors and Faculty Mentors: A Qualitative Analysis

Many universities have started to recognize the potential of student-to-student collaboration and integrated student mentoring into their curricula (Loda et al., 2020). Student mentors (or peer mentors), who are typically more experienced students at least one year ahead in their studies, fulfil the role of teaching their less advanced peers (Loda et al., 2020). Studies have demonstrated it to be an effective tool in improving students' learning outcomes and fostering their personal and professional development (Lockspeiser et al., 2006). First year students especially have been shown to benefit from student mentoring as it eases their transition into the academic community and enables them to utilize the knowledge and experiences of more senior students who have successfully completed the first year (Altonji et al., 2019). Student mentors are in the unique position to possess the necessary knowledge to guide younger students while still remaining close to the students' experiences to empathize with their struggles (Loda et al., 2020). This allows them to provide targeted assistance to common problems students encounter and understand how to break down difficult topics in an accessible way (Lockspeiser et al. 2006).

The present study will use interviews with first year psychology students at the University of Groningen that attend the course 'Academic Skills' which is taught by a student mentor and a faculty mentor. This offers an excellent opportunity to investigate the experiences of first year psychology students with student mentoring. The study allows the students to compare both mentors in the same course and environment, identify the specific characteristics they favour in a mentor and reflect on how the mentors influence their engagement in class. More specifically, cognitive congruence of the mentors will be examining. Cognitive congruence can be described as the teachers using familiar language to explain topics in an easy and accessible way (Loda et al., 2019) and sharing a similar

knowledge framework with the students to be able to understand their difficulties and know how to provide help (Lockspeiser et al., 2006). The first aim of the study is to examine whether the students perceive qualitative differences in cognitive congruence between their mentors. Additionally, the present study looks at the difference's students perceive in their engagement with the different mentors.

The study will offer valuable new insights into the topic of student mentoring. Previous research has in large part focused on medical students (Lockspeiser et al., 2006; Loda et al.,2020; Yew & Yong, 2013) which makes it important to investigate the outcomes of student mentoring for students of other subjects, such as the psychology students of the present study. Additionally, the qualitative nature of the study will result into very in-depth information on the concrete experiences and opinions of the participants (Jones, 2022). Having interviews offers the students more freedom to voice their individual perspectives since trying to get the full scope of their experiences and opinions in a questionnaire is rather difficult (Thornberg et al., 2020). Therefore, this qualitative approach will offer additional insights to the quantitative studies that have already been done on the topic, as it specifically examines the student perspectives.

Advantages of Student Mentors in Problem Based Learning

Due to the increased interest in student mentor programs, many studies have started to examine the benefits of this approach for students. Research has shown that students who engage in student mentoring experience higher academic achievement and lower dropout rates (Lockspeiser et al., 2006). Furthermore, student mentors play a crucial role in fostering students' confidence in their abilities and creating a positive learning environment (Lockspeiser et al., 2006; Altonji et al., 2019). Students involved in student mentoring programs tend to exhibit high attendance rates (Lockspeiser et al., 2006) and overall satisfaction with their educational experience (Loda et al., 2019). Students appreciate that

student mentors can give clear explanations and offer honest, realistic, and helpful feedback (Loda et al., 2019). Due to their own experiences of being a student, student mentors possess a deep understanding of the challenges students face and can anticipate their needs, providing guidance and sharing strategies to overcome obstacles (Lockspeiser et al., 2006). Additionally, student mentoring programs have been associated with higher intrinsic motivation, increased time spent on individual study, and improved learning outcomes (Loda et al., 2019; Pilot et al., 2021; Yew & Yong, 2013). Especially first year students may benefit from student tutoring as it can decrease difficulties that are often associated with a transition into the academic community (Altonji et al., 2019). Furthermore, the more experienced student mentors likely have firsthand experience with navigating the ’hidden curriculum’, that includes unspoken norms, expectations, and social dynamics of the university. Therefore, they can help their students to understand the academic, social, and professional aspects of higher education that go beyond the formal curriculum (Altonji et al., 2019).

Another factor that may has positive benefits for students is autonomous supportive teaching, which focuses on an interpersonal tone of understanding that appreciates, supports, and vitalizes students' psychological needs (Reeve, 2016). This teaching style benefits students by enhancing their academic achievement, well-being, and overall satisfaction with the learning process. Student mentors may excel in autonomous supportive teaching due to their proximity in age and recent experience as students themselves (Loda et al., 2020). Their relatability and understanding of students' challenges enable them to effectively guide and support their less advanced peers (Lockspeiser et al., 2006), creating a positive environment that supports students’ autonomy, engagement, and academic growth (Reeve, 2016).

These benefits of student mentoring may be particularly useful in problem-based learning (PBL) (Pilot et al., 2021). PBL is an active learning approach where students collaboratively use their theoretical knowledge to find solutions to practical scenarios (Pilot et

al., 2021). The focus is placed on encouraging group collaboration, developing critical thinking skills, and promoting self-directed learning (Cianciolo et al., 2016; Pilot et al., 2021). The clear explanations and targeted feedback of student mentors is thought to be an integral tool that helps the students engage with the material and effectively shape their own learning experience (Loda et al., 2019; Schmidt & Moust, 1995). Additionally, their sensitivity to the students' needs may make near-peers excellent mentors to guide the students through their self-directed learning during PBL and know when to intervene and what kind of help to offer to steer the students in the right direction (Cianciolo et al., 2016; Lockspeiser et al., 2006; Schmidt & Moust, 1995).

The strengths attributed to student mentors and their effectiveness in facilitating student learning can, at least in part, be attributed to an underlying factor: their enhanced cognitive congruence (Schmidt & Moust, 1995)

The Benefits of Cognitive Congruence and its Influence on Student Mentor Effectiveness

Cognitive congruence can be described as the teacher and student having a similar knowledge framework (Lockspeiser et al., 2006) That includes the teacher's ability to identify important topics, know common difficulties students may experience and use language that is familiar to the students to effectively guide them through the learning material (Loda et al., 2019). Additionally, cognitive congruent teachers use concepts the students use and can explain those in a way the students can understand easily (Schmidt & Moust, 1995).

It has been shown that teachers with high cognitive congruence can enhance the students' learning outcomes. Their ability to break down concepts in an accessible way makes it easier for students to understand difficult topics (Loda et al., 2020). Furthermore, teachers with high cognitive congruence are better at providing personalized support since they can anticipate the problems students experience and are able to provide targeted and useful help (Lockspeiser et al., 2006).

Student mentors likely have high cognitive congruence with their students. Since they have recently learned the same material, they should be able to anticipate the students' struggles, teach at an appropriate level, and identify effective methods to teach difficult topics (Lockspeiser et al., 2006). The student mentors are slightly advanced in the material and should have good subject knowledge. Therefore, they can help their students and function as role models while still retaining their cognitive congruence (Loda et al., 2020).

The student mentors are not only close in learning to their mentees; they are likely to be close in age. This is beneficial because the natural use of language will be similar which serves to further enhance cognitive congruence (Loda et al., 2020). Moreover, students feel less anxious asking their student mentor a question rather than asking an older teacher. The feedback received by the student mentor has been found to be more honest, realistic, and helpful which could be an effect of the higher cognitive congruence (Loda et al., 2019). Lastly, it is important to consider the subjective experiences of each student and examine their impressions of their teacher's cognitive congruence. According to Loda et al. (2019), students consistently rate their student mentor's cognitive congruence higher than that of older, more experienced teachers.

Based on these previous findings, it can be assumed that the effectiveness of student mentors is at least partly due to their enhanced cognitive congruence (Loda et al., 2020). The present study will look at that connection and use the students' perspectives to examine possible qualitative differences in cognitive congruence between student and faculty mentors. Further, it is important to examine the students' opinions on how cognitive congruence influences their learning. This study will look at one specific factor that influences learning outcomes: the students' perceived differences in engagement with student mentors and with faculty mentors.

Effects of Cognitive Congruence on Affective and Behavioural Engagement

Studies have demonstrated the multitude of positive outcomes associated with student engagement. Engaged students experience advancements in their professional, academic, and social development (Owusu-Agyeman, 2021). Academic success is correlated with engagement, as engaged students demonstrate higher levels of persistence and commitment to their coursework (Owusu-Agyeman, 2021). Furthermore, universities that can engage their students have better student retention and graduation rates (Owusu-Agyeman, 2021) and increasing engagement is a good preventative strategy against dropout (Lovelace et al., 2018).

Engagement can be divided into three categories: affective engagement, cognitive engagement, and behavioural engagement (Ben-Eliyahua et al., 2018). However, due to time constraints, the present paper will only focus on the students' experiences with affective engagement and behavioural engagement.

Affective Engagement

Affective engagement can be described as the feelings a student has towards learning, school, and their teachers. Especially the students' emotions during the lesson, such as interest, enjoyment, or boredom, contribute to their affective engagement (Thornberg et al., 2020).

The students' feelings during the lessons are influenced by cognitive congruence in several ways. Rotgans & Schmidt (2010) found that cognitive congruence is related to the students' situational interest. Situational interest has been described as "focused attention and an affective reaction that is triggered in the moment by environmental stimuli, which may or may not last over time" (Hidi & Renninger, 2010, p. 113). Based on that, interest and positive feelings during class are both related to cognitive congruence. A teacher that is cognitively congruent will know how to capture the students' attention and construct lessons that interest them since they will be able to emphasize with the students and know how to engage them

effectively, for example by employing a more interactive teaching style (Lockspeiser et al., 2006).

The similarities in knowledge framework of teachers with high cognitive congruence will allow them to identify how difficult certain topics are for the students and construct lessons that challenge the students but are not too difficult at the same time. Finding an adequate level of difficulty will make the overall learning experience more positive and engaging for the students (Lavrijsen et al., 2020). Too easy lessons are known to disengage and bore the students (Kanevsky & Kaighley, 2003) while too difficult lessons commonly lead to frustration and anxiety (Acee et al., 2009) which will also have a negative effect on affective engagement.

Lastly, the teacher's ability to construct effective and engaging sessions will influence whether the students like the course. Students react positively to cognitive congruent teachers since they usually understand each student's learning needs and have a structured approach to teaching. They often use examples and simple language to illustrate things effectively (Yew & Yong, 2013). The lessons they construct are visual and interactive to engage the students (Lockspeiser et al., 2006). Furthermore, cognitive congruent teachers are known to have good questioning skills. They can ask clear and critical questions to support the students' understanding of the material (Yew & Yong, 2013). A teacher with higher levels of cognitive congruence will be in touch with their students' academic needs and will be able to react to any struggles the students face and guide them effectively through the lesson (Lockspeiser et al., 2006). Altonji et al. (2019) report that students experience a reduction in anxiety and an increase in self-confidence due to student mentoring. Furthermore, cognitive congruent teachers will value the students' voices and agency as well as considering their opinions when constructing lessons (Zhu et al., 2021). This will further promote students' affective engagement.

These arguments lead to the conclusion that students are likely to have more positive emotional reactions to cognitive congruent teachers. Since student mentors have been found to be more cognitively congruent (Loda et al., 2020), it is likely that they will also increase the affective engagement of students.

Behavioural Engagement

Behavioural engagement is defined as the observable involvement in class and encompasses behaviours like actively participating in class, putting effort into the work, and paying attention without disrupting the class. It indicates the students' commitment to actively contribute to their education (Ben-Eliyahua et al., 2018; Fredricks et al., 2004). Cognitively congruent mentors have a good understanding of students' perspectives and academic needs (Lockspeiser et al., 2006). This can help them to create a classroom environment where students feel comfortable to work and participate. Since cognitive congruent teachers are known to promote effective communication and an interactive learning environment (Lockspeiser et al., 2006), it is reasonable to assume that students will have a high incentive to engage with their mentors and peers.

A cognitively congruent teacher usually speaks in familiar language that is similar to the students' own use of language (Loda et al., 2020). This eases the students understanding and makes it easier and less intimidating for them to follow the explanations. It has been found that procrastination is often due to the students' low confidence in their ability to take on a certain task (De la Fuente et al., 2021). Therefore, easier explanations may make it less intimidating to start tasks which can lead to less procrastination in students (De la Fuente et al., 2021). Additionally, mentors with high cognitive congruence can anticipate students' problems and provide effective help and resources to support the students through any trouble that may otherwise have caused a drop in motivation (Lockspeiser et al., 2006).

Furthermore, research suggests that students are more likely to invest effort and preparation into classes that they find enjoyable and stimulating (Ben-Eliyahu et al., 2018). Since cognitively congruent mentors are good in creating a positive learning environment that fosters enthusiasm, motivation, and commitment to academic work (Loda et al., 2020), they can motivate students to actively engage and dedicate the necessary effort to succeed in their studies. Due to these arguments, behavioural engagement may also be positively influenced by cognitive congruence.

Current Research

The students' learning experiences and their affective and behavioural engagement are highly individual and subjective constructs. Thus, it is important to construct studies that include the students' perspectives in as much depth as possible. Using qualitative methods is a great way to ensure that the authentic experiences of students are being heard. The students can define by themselves what they find important in a teacher. Having interviews offers them more freedom to do so since trying to get the full scope of their experiences and opinions in a questionnaire is rather difficult. Instead of just getting descriptions of important teacher characteristics, the students will be able to offer their own unique perspectives on the reasons why they find certain characteristics especially important. Additionally, qualitative research allows an openness to discover new themes that have not been considered previously. The students will have the possibility to engage with the research more directly since they will be free to mention the facts, they find important rather than getting a questionnaire about predefined factors. Through using qualitative methods, it will, therefore, be possible to get a more complete view of the participants' opinions and be able to discover and examine new factors that have been neglected in large quantitative studies (Jones, 2022; Thornberg et al., 2020).

Method

Design

This study employed a qualitative phenomenological approach to investigate student perceptions of their mentors. Specifically, the aim is to compare student and faculty mentors in terms of social and cognitive congruence and examine how these factors influence student engagement during class. The phenomenological approach, as outlined by Husserl (1859), focuses on understanding and exploring the lived experiences of individuals. It can provide greater opportunity to uncover psychological processes that can influence engagement (Ring 2017), which might be missed when using a quantitative approach. Additionally, the current method has previously been used in the educational setting to shed light on problems and experiences of the students (Ring 2017).

Method

Through the utilization of semi-structured interviews, there is an opportunity to conduct an in-depth exploration of the students' experiences, a task that would prove challenging when employing a questionnaire that restricts participants to predetermined response options considering the limitations associated with questionnaires (Razavi, 2001). Given the capacity of the phenomenological approach to accommodate open-ended questions (Ring, 2017), we opted for a comparable semi-structured format. The questions were divided into two sections, with one section focusing on social congruence and the other on cognitive congruence. Within each section, the latter half concomitantly asked about cognitive, affective, and behavioural engagements. When warranted, follow-up questions were asked. Thus, there was ample opportunity to elaborate and ask follow-up questions, to ensure that we captured the unique,subjective experiences of the students.

Participants

The study employed a purposive sampling approach. Contact with potential participants was established through a combination of in-person and online methods as part of the meticulous sampling process. Once participants provided their informed consent, interviews were scheduled at mutually agreed-upon dates and locations. To ensure consistency and adherence to specific criteria, we specifically targeted first-year psychology students at the University of Groningen who possessed proficient English language skills and were actively enrolled in the "Academic Skills" course. This particular course provides valuable academic support to students through the provision of both a faculty mentor and a peer mentor. A total of 12 participants were gathered as this has been found to reach data saturation (Guest, Bunce, and Johnson, 2006). This indicates that the sample size was sufficient to capture a comprehensive range of perspectives and insights relevant to the research objectives.

Data collection

This research study was approved by the ethics committee of the University of Groningen in April 2023. To ensure anonymity of all parties involved the participants were asked not to mention anyone by name during the interview. During the transcribing phase, all names were removed from the text altogether. Second, participants were told that the interview was confidential. Additionally, participants were asked to sign an informed consent form where it was briefly explained to them what the study is about and that the interview would be recorded. Lastly, participants were told they could retract their data from the study within 10 days and that they were entitled to their right to withdraw.

Regarding the research timeline, the initial phase encompassed the formulation of interview questions. Prior to commencing actual data collection, practice interviews were conducted as a preparatory measure. To enhance the validity of the questions, several measures were implemented. The first version of the interview script underwent scrutiny by

our supervisor and an external expert well-versed in qualitative research. Subsequently, a pilot study was conducted, involving three practice interviews. In addition to the two designated interviewers, an additional researcher was present to carefully monitor the participants' comprehension of the questions and evaluate whether the questions effectively elicited the desired information. As the researcher's interviewing skills improved and confidence grew, the interview format transitioned from group sessions with three interviewers to sessions conducted by two interviewers. However, it should be noted that one interview was conducted by a single interviewer. These meticulous steps were taken to ensure the integrity and reliability of the interview process, and to continuously refine and enhance the methodology throughout the study. We chose to revise the script after the practice interviews and after the first real interviews due to a lack of response or confusion from the participant. This is a common event in qualitative research as it is a reflexive process (DeCarlo, 2019). The main changes during these revisions consisted of cutting out questions that did not give new information, finding clearer formulations for questions that were confusing to the participants, and adding follow-up questions in places where we did not get sufficient depth of information with our original questions. Thus, the quality of the script was continually improved to ensure that the acquired information fit the constructs the study was designed to measure and had enough depth to answer the research questions.

Procedure

Before the interviews the participants were informed about the confidentiality of the data and each interview started with small talk and a few easy questions. The questions were based on previous literature (Schmidt & Moust, 1995; Loda et al., 2020). More specifically, we adopted similar themes in order to better understand the student experience of congruence. The duration of the interviews ranged from 35 to 80 minutes. All the interviews were conducted in the Faculty of Behavioural and Social Sciences. For most interviews a private

room could be arranged, but some interviews were conducted in public areas; in those cases, it was ensured no one could overhear the interview. Most of the participants were provided with snacks and/or something to drink in order to make them feel comfortable and relaxed enough to engage in conversation. Furthermore, all the interviews were audio recorded on a device, as well as a second recording to prevent loss of data. Recordings were transcribed and all the participants were given a number from one to twelve to sort the transcripts. Names were only used to keep track of which transcripts were done and kept between members of the research team. Lastly, the names of the mentors of the students were not mentioned in the interviews and otherwise excluded in the transcript.

Data analysis

After the successful collection and transcription of data, a systematic process was initiated to analyse the data. Predetermined categories, informed by the literature, allowed for a predominantly deductive analytical approach (Brinkmann, 2023; Döringer, 2021). Any instances of inductive analysis followed thereafter, to capture emergent insights or themes not initially considered. Using ATLAS.ti software (version 23.0.6), the transcripts were meticulously coded according to these categories, ensuring the representation of every piece of information was accurate (G. Tort-Nassarre et al., 2023). Upon conducting a comprehensive deductive analysis, a layer of inductive analysis was carried out (Döringer, 2021; Bingham & Witkowsky, 2022). This facilitated the identification of new themes or patterns that emerged from the data, potentially offering novel insights (G. Tort-Nassarre et al., 2023). To support the results, quotes that accurately reflected the categories and unique findings were carefully selected and extracted from the transcripts (Loda et al., 2020; G. Tort-Nassarre et al., 2023).

Results

For the deductive analysis a similar process as that of Loda et al. (2020) was used. Firstly, cognitive congruence was divided into four categories based on the results of previous studies. The first of those categories was ‘Use of Language’ as many studies indicate that a familiar language of the mentor is a main factor to increase cognitive congruence (Loda et al., 2020). The next category is ‘Communication Style’, which is also founded in the mentors’ ability to use easy language. However, while the first category is more about the mentors’ vocabulary and language during explanations, ‘Communication Style’ focuses on the interactions between mentor and students. This encompasses for example whether there is a general air of understanding between both parties, where the mentor is able to convey their instructions and general expectations to the students but also listens to the students’ questions and suggestions and puts effort into answering questions and adjusting their teaching to the students’ needs (Yew & Yong, 2013; Lockspeiser et al., 2006). The third category ‘Knowledge Framework’ encompasses quotes that indicate whether the mentor is on a similar cognitive level as their students and can thus easily anticipate and adjust to their learning needs (Lockspeiser et al., 2006). The last category is ‘Teaching Style’, which includes the overall process of knowledge transfer and the mentors’ ability to create a learning environment that enables students to work comfortably and put the necessary dedication towards their academic development (Yew & Yong, 2013)

Following a similar deductive approach to Loda et al. (2020), subcategories were identified for each of the four categories to further sort the quotes. Initially, these subcategories were based on the finding of previous studies (Lockspeiser et al., 2006; Loda et al., 2020; Yew & Yong, 2013). However, during the process of analysis, some quotes were identified that did not fit the previously established subcategories. In those instances, new subcategories were added following a more inductive approach, as described by Bingham (2022). The full organisation of categories and subcategories is illustrated in *Figure 1*.

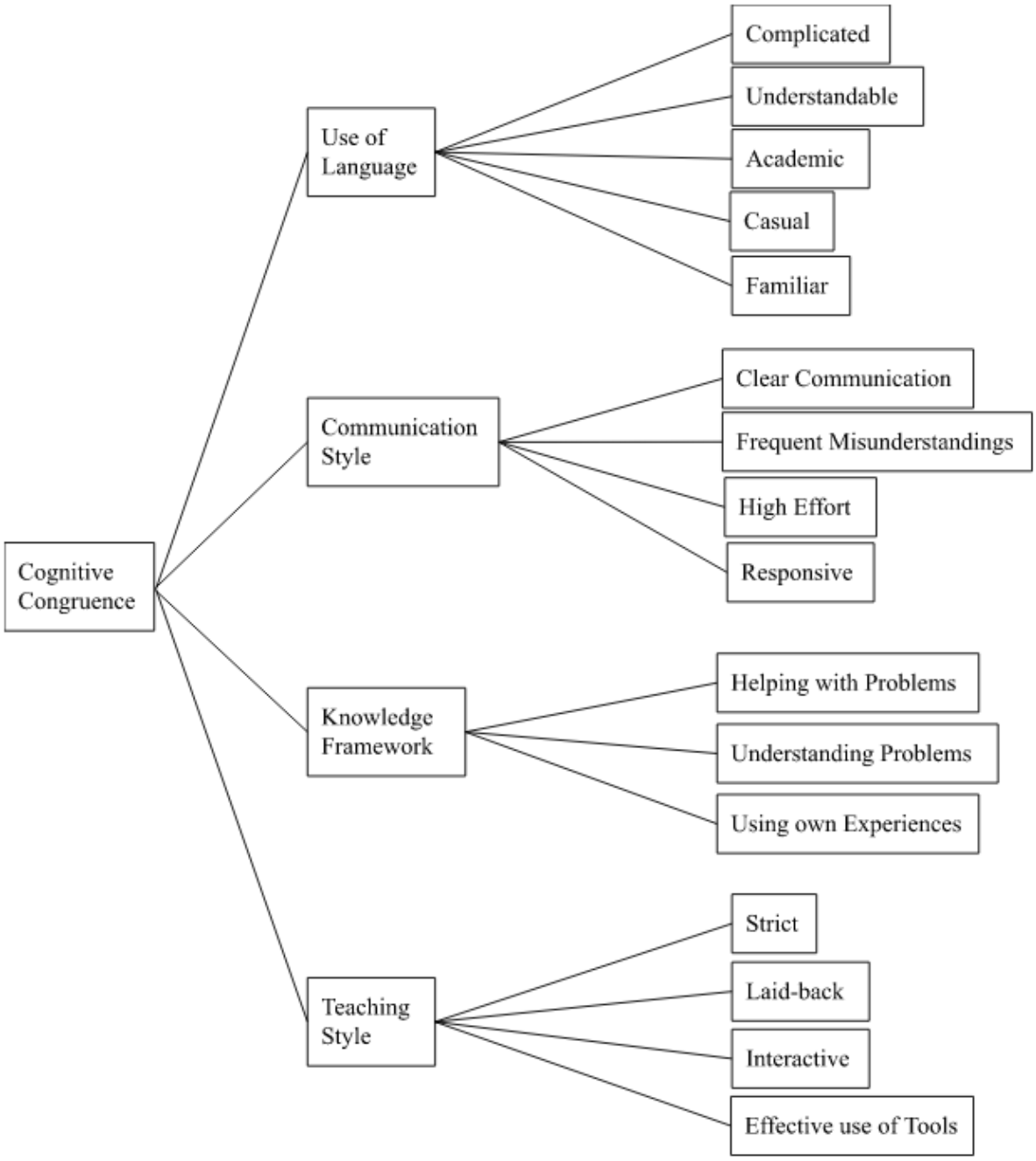

Figure 1: Categories and Subcategories used for Cognitive Congruence in the Qualitative Analysis

Both engagement types were divided into positive and negative effects the students experienced for their engagement. Additionally, subthemes were added using a mixture of a deductive approach based on previous research (Fredricks et al., 2004) and an inductive

approach similarly to the way subthemes for cognitive congruence were identified (Bingham, 2022).

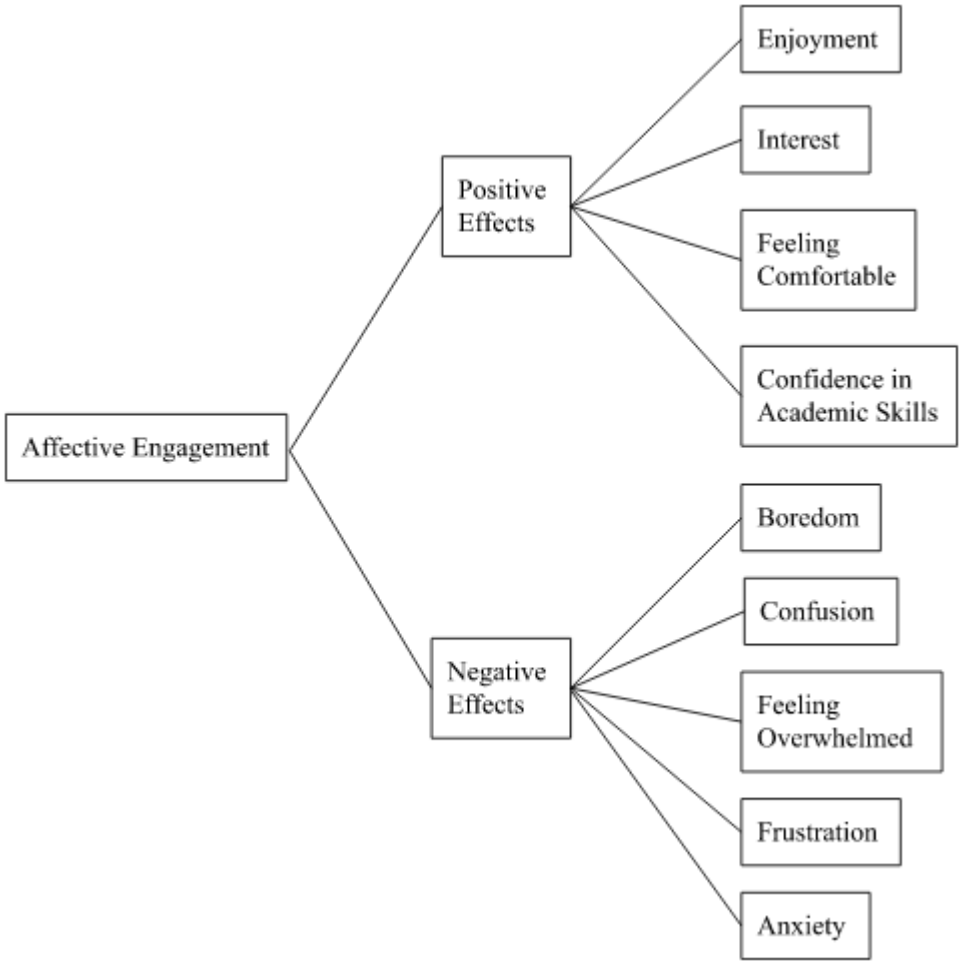

Figure 2: Categories used for Affective Engagement in the Qualitative Analysis

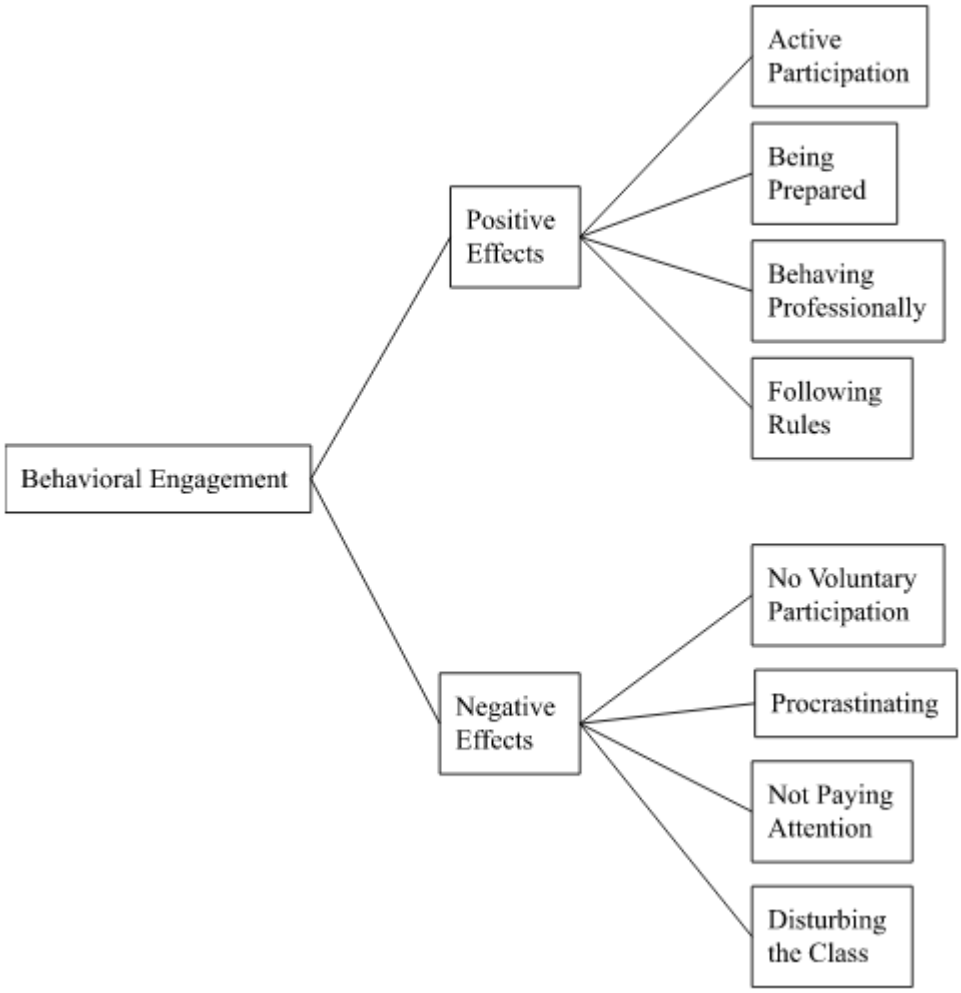

Figure 3: Categories used for Behavioural Engagement in the Qualitative Analysis

The following result section will at first focus on describing the qualitative differences in each category of cognitive congruence, as described by the students. Then, separate sections will follow to illustrate the participants impressions on how those qualitative differences influenced their affective and behavioural engagement. Lastly, unexpected findings that were discovered during the inductive analysis will be illustrated (Bingham, 2022).

Cognitive Congruence in Student Mentors and Faculty Mentors

Use of Language

The participants observed that student mentors used simpler language that was generally closer to the students' own use of language.

"I think it was pretty good they explained everything in like day-to-day language." (Participant 11)

The students found this familiar way of speaking especially useful because they were new to university and participants described how they had to adjust to the new academic environment. The student mentors were able to ease that process because they were reported to convey the material in an accessible, less intimidating way, that the participants understood more easily.

"They [student mentor] *are able to break it down into a way that's understandable for students. Cuz I mean they're a student."* (Participant 5)

In contrast to the simpler language of the student mentors, the participants described the faculty mentors' language to be more complicated. They had a more academic style of speaking that was not as accessible for first year students.

"It [language of the faculty mentor] *was kind of more theoretical, like up in the air, hard to understand and a lot of analogies."* (Participant 5)

This speaking style led to more confusion and the participant generally reported having more problems with understanding the faculty mentor. The participants attributed these problems to a greater distance in knowledge and use of language between the faculty mentors and the students.

"They [faculty mentor] *find it a bit harder to kind of tone down their explanations for students sometimes."* (Participant 2)

Generally, the students reported a preference for the student mentors' language because of its understandability and familiarity. However, one participant also said that they appreciated their faculty mentor's academic way of speaking, like using advanced vocabulary,

because they learned more from them. This participant recognized that the academic language came along with more in-depth knowledge about the subject that they found very useful.

> *"She speaks a bit more academic, obviously, and she has more knowledge. So, when you ask her certain questions, she can specify on them properly."* (Participant 7)

Overall, the participants did perceive qualitative differences in this category, as the student mentors were described to use familiar language that the students could understand more easily. Meanwhile, the faculty mentors were reported to talk in a more academic way, for example by using complicated vocabulary and less approachable analogies. That type of language was more difficult for the students to follow but also lead to greater learning outcomes in some instances.

Communication Style

The participants reported having more difficulties communicating with the faculty mentors. Some students experienced frequent misunderstandings and felt that the faculty mentors took less effort in trying to understand the students' perspectives and needs and struggled with getting their point across clearly.

> *"It's very difficult to communicate with the faculty mentor. Just because we don't always feel like he understands what we're saying. There's a lot of miscommunications."* (Participant 9)

The student mentors were described to have a clearer, more approachable way of communicating that lead to less confusion or misunderstandings. Participants noted that the student mentors put more effort into the communication process by being available more often and following up on questions and problems at a later date.

> *"I sent my new topic to my student mentor actually and he got back to me with a huge text saying 'Oh yeah, that's really interesting. Just make sure that you might include*

> *this and this and this, and really focus on these differences. Etc etc' So he again put a lot of effort into making sure that I am approaching a good direction."* (Participant 6)

Overall, participants described that the student mentors were able to clearly communicate instructions and expectations while communication with faculty mentors was described to lead to misunderstandings in some instanced. Additionally, students remarked that the student mentors often put more effort into answering questions and accommodating the students' needs.

Similarities in Knowledge Framework

The participants described that student mentors were often able to use their recent experiences with the course to facilitate their explanations. Participants remarked that student mentors could easily identify which topics may be difficult for the students and need more explanation. Furthermore, they understood how to explain those topics in a way the students could understand.

> *"He* [student mentor] *was a student himself a few years ago. So, he was like… easy to relate to us and help us, but also he was studying long enough that he had experience, and he knew what he was doing."* (Participant 11)

Relating to that, the students also reported that the student mentors could provide more useful resources to facilitate the students learning process. Additionally, the student mentors' tendency to share how they approached problems during their first year was perceived as useful.

> *"So, I think she* [student mentor] *was very resourceful in a way; like she has plenty of resources for actual academic problems like failing exams or failing ECT's or stuff like that."* (Participant 2)

However, the student mentors were described to have less expertise than the faculty mentors. Participants reported that this was a problem in some areas, for example when seeking advice

on a more complex academic topic. According to the participants, student mentors were also less proficient when it came to answering questions on the spot that went beyond the material.

> *"Sometimes there was, like a lot of things where he* [student mentor] *wasn't quite sure about certain questions and stuff like that."* (Participant 7)

For the faculty mentors, the findings were quite opposite. Participants reported a lesser ability to relate to the difficulties first year students experience and use that understanding to improve explanations and make them more accessible.

> *"I feel like if you are that that deep into research paper writing and stuff like that, you sometimes don't really get how someone thinks when they just start to learn the skill."* (Participant 7)

However, the students still valued the faculty mentors in this regard. Due to their greater expertise, they could be approached for more difficult questions and were reported to give better feedback on academic topics.

> *"My faculty mentor was really good at explaining what I need to do and giving me advice on how I should approach my topic and all that."* (Participant 11)

Overall, the students seemed to appreciate having both mentors; one with a similar knowledge framework and one with enhanced expertise. The strength and weaknesses of both mentors seem to complement each other very well in this regard. Thus, most participants could not identify a favourite mentor for this category but rather liked having both mentors available.

Teaching Style

Generally, the faculty mentors were reported to create a strict and disciplined atmosphere during their lessons. Participants described the faculty mentors' lessons as similar to lectures where they mostly sit quietly and listen and always raise their hand before speaking. They reported being less comfortable with making mistakes and asking questions in

those lessons. However, some participants also recognized the advantage of a more disciplined learning environment and reported that lessons with the faculty mentor tended to be more productive.

"If you want to get students to get stuff done, you have to be a bit more strict." (Participant 4)

The student mentors were described to create a relaxed and open atmosphere and participants reported being more at ease and comfortable during those sessions. However, according to the students, it was also easier to get distracted. Furthermore, sessions with student mentors were described to feel less like a lecture and more like an open, interactive discussion. Participants generally appreciated and preferred the more interactive sessions.

"I probably just preferred the ones with the student mentor cause they were more interactive. With the faculty mentor it was a lot more listening to someone talking." (Participant 5)

Overall, the student mentors were described to create more interactive sessions were students felt comfortable. The lessons with the faculty mentor were reported to be stricter and more disciplined.

Effects on Affective Engagement

The more relaxed teaching style, more familiar way of speaking, and closeness in experience with the student mentors were described to be important factors that lead to the students feeling more comfortable and experiencing more positive feelings during class. The students described increased levels of enjoyment and interest during classes with their student mentors.

"With the student mentor, I always felt like I enjoyed the class and he always made it interesting. So, I guess it made me feel good in that sense." (Participant 11)

However, the relaxed teaching style seemed to have a downside, because participants reported being more easily distracted in sessions with the student mentor.

> *"So, there wasn't that that many like super strict rules* [with the student mentor]*. I found that a little distracting."* (Participant 6)

The confidence in their academic skills seems to be tied to the mentors' ability to explain things in an understandable way, which was generally reported to be higher in the student mentors. The student mentors' lessons seemed to be less intimidating because of that. Good explanations and extensive information about the tasks ahead were also described to ease the students worries and make working on course assignments a more positive experience.

> *"Because I knew what I was doing, I felt more encouraged and more motivated towards the class and more kind of comfortable and overall, less stress. So, I think that was good."* (Participant 11)

Too complicated explanations were described to cause more negative emotions, like confusion, frustration and feeling overwhelmed. The participants observed these emotions during classes with the faculty mentors.

> *"Sometimes the topics are a little confusing, so you have more questions. You're like 'Oh my God. I would never pass this year' or something. You just get overwhelmed."* (Participant 9)

Additionally, the faculty mentors seemed to have higher expectations. The students reported feeling more pressure and anxiety during sessions with the faculty mentors and feeling less confident in their skills.

> *"Our faculty mentor… I don't know, she just stresses me out."* (Participant 12)

Overall, the students reported positive emotions in regard to the student mentors, while the faculty mentors were mentioned more frequently when discussing negative

emotions. Therefore, based on the reports of the participants, student mentors had a more positive influence on affective engagement.

Effects on Behavioural Engagement

Many of the participants described having problems with procrastination that impacted their ability to start tasks early and be prepared for class. These problems were especially described regarding the student mentors because the laid-back teaching style and the familiar communication with the students made them seem less like authority figures. Due to that, students also reported that the rules were not followed as much in sessions with the student mentors.

> *"Like if I have someone that is very compassionate and on the same level as me, I may not feel as inclined to do the propaedeutic paper or to put much effort into it."* (Participant 8)

The faculty mentor was reported to be stricter. Because of the greater distance, due to for example less familiar communication and the enhanced experience, the students reported feeling more pressure to behave professionally and get tasks done in time. The faculty mentors were also described as likely to regularly check the progress of the students and hold them accountable.

> *"He* [faculty mentor] *would talk to each person alone. Like, 'What's the progress? How are you thinking of approaching this?'. So, if you had no progress that would be awkward. So, you kind of were being watched and you were like, 'okay, tomorrow I have academic skills, I still have to do something for my papers.'"* (Participant 9)

However, many participants also reported that the greater distance they felt towards the faculty mentor made them more hesitant to participate. Students described feeling intimidated, more hesitant to ask questions because of more frequent miscommunications, and more worried that making mistakes would affect their grades.

"The faculty mentor is a lot more intimidating, so nobody wanted to raise their hand ever." (Participant 5)

The more familiar communication and use of language of the student mentors was observed to create an atmosphere where students felt more comfortable to speak up and not afraid to make mistakes.

"It was okay to just make mistakes and it's never like he [student mentor] *would say, 'No, that's a mistake.' It was more like easing into like, 'Yeah, that's a good idea, but maybe somebody has another idea.'"* (Participant 9)

Additionally, the student mentors' lessons were described to be more interactive which motivated students to participate more.

"I always wanted to participate because it just felt like a conversation that we should all be having together. It was never like the student mentors saying everything and then maybe one or two people contributing. It was always just like a big group discussion. So, I always felt like I wanted to be part of that." (Participant 11)

A last factor that was described to influence behavioural engagement, was the quality of the explanations. If the students could easily understand everything and were given all necessary information, they reported less hesitation to start tasks because the assignments would seem more doable.

"And then I was like, 'OK, now I have an idea what I have to do and like I have it in mind now. So let's do it now, while I still have the motivation.'" (Participant 9)

Instruction that was not at the students' level – either too easy or too difficult – was described to lower the students' initiative to engage with the course. Since the student mentors were described to have an easier time adjusting the instruction to the students' level, they were probably better at increasing behavioural engagement in this regard.

> *"Sometimes they were asking questions and it was really silent all over the room. No one had anything to say, or it was too obvious, or maybe too difficult, so that was a little bit awkward."* (Participant 3)

Overall, the participants described that both mentors enhanced behavioural engagement it their own way. The faculty mentors held the students accountable and got them to behave more professional, but the students felt less comfortable to participate in those sessions. Meanwhile, the student mentors were described to be better at creating an environment where everyone understood the material and felt comfortable to ask questions and make mistakes, but the students were less disciplined in these sessions.

Inductive Findings

An unexpected theme that was present in almost all categories was the fact that student mentors and faculty mentors seemed to have complimentary skills and weaknesses. While the student mentors were described to have skills that imply high cognitive congruence, the participants did not always see that as an advantage. The student mentors were described to lack the necessary expertise to help in some areas and sometimes seemed not to have enough authority to motivate students to get their work done. Thus, the students preferred the faculty mentor for some matters, for example to answer difficult questions and to keep them focused during class.

> *"So, it's actually quite useful when both of them were in the lesson. […] The faculty mentor helped more in an academic sense, and the student mentor was able to kind of get a bit more personal."* (Participant 7)

Participants remarked that both mentors were helpful in different areas, and they complimented each other very well. Often, they were able to compensate for the others weakness which meant that both of them together were reported to meet more students needs than either one on their own.

Discussion

The present study set out to discover the students' perspectives on student and faculty mentoring. More specifically, the aims were to see if students experienced any qualitative differences in cognitive congruence and affective and behavioral engagement.

The findings revealed that students experienced a stronger sense of cognitive congruence in their interactions with student mentors when compared to faculty mentors. Student mentors were described to use simple language, closer to the students' own use, making the material more accessible and understandable. This is in line with the findings of Loda et al. (2020) who reported that student mentors utilized simple language to enable effective knowledge transfer. Moreover, student mentors were reported to have effective communication skills, actively engaging with students, and following up on their questions. This aligns with previous studies emphasizing the importance of a clear, straightforward communication style that can lead to more effective learning and less frequent misunderstandings (Yew & Yong, 2013). The student mentors were described as having a more similar knowledge framework to the students and using their own experiences to facilitate their explanations. Within that theme, participants remarked on the student mentors' strength in identifying difficulties and knowing how to provide help at an appropriate level. Lockspeiser et al. (2006) had similar results and found that student mentors were better at identifying the appropriate teaching level and were not afraid to simplify things drastically if needed. Additionally, student mentors were described to have valuable information and resources. This indicates that they enabled students to access the hidden curriculum which includes information they would not have heard about from official sources (Altonji et al., 2019). While faculty mentors seemed to possess a more extensive knowledge framework, they struggled to relate to the challenges faced by first-year students, resulting in difficulties

in explaining and communicating. Similar problems were described by Yew & Yong (2013) who reported that teachers with low cognitive congruence could not understand the students' learning needs and did not have sufficient strategies to help the students. This can have negative consequences for the students' learning outcomes, as the ability to relate to the students was identified as an important factor for successful teaching (Thornberg et al., 2020). The teaching styles differed, with faculty mentors adopting a stricter approach, while student mentors created a more relaxed and interactive atmosphere. Lockspeiser et al. (2006) came to similar conclusions and remarked on the ability of student mentors to create visual and interactive lessons.

Consequently, student mentors were described to have a positive effect on students' affective engagement since students reported feeling more comfortable, interested, and motivated. This is similar to Altonji et al. (2019) who also reported some positive outcomes of student mentoring that relate to affective engagement, such as lower anxiety and higher self-confidence. However, student mentors' relaxed teaching style sometimes led to increased distractions and procrastination. Thus, the students experienced those factors as being negative for their behavioral engagement. This is not in line with previous findings that reported more effective studying to be an outcome of student mentoring (Altonji et al., 2019). In the present research, the faculty mentor was perceived to be better at eliminating distractions and holding the students accountable. However, in terms of participation, the student mentors were described to make the students more comfortable to contribute to discussions, ask questions and make mistakes. Therefore, both types of mentors had characteristics that encouraged their students' behavioral engagement in different areas.

The findings can also be interpreted in the context of Reeves' (2016) insights in autonomy supportive teaching. He describes teachers' motivating style to exist along a bipolar continuum with teachers on one end being highly controlling while teachers on the other end

apply an autonomous supportive teaching style. Autonomy support is defined as the delivery of instruction through an interpersonal tone of understanding that appreciates, supports, and vitalizes students' psychological needs (Reeve, 2016).

It is likely that cognitive congruence promotes autonomy support. Due to their more similar knowledge framework, teachers with high cognitive congruence can understand the students' experiences, perspectives, and struggles (Lockspeiser et al., 2006). This shared cognitive ground enables them to support the students learning and enhances their ability to effectively communicate and connect with students (Yew & Yong, 2013). These skills will enable cognitive congruent mentors to provide personalized guidance, support, and encouragement, which are all important factors in promoting autonomy support (Reeve, 2016). Based on the results of the present study it is reasonable to assume that student mentors may be especially good at promoting autonomy support due to their high cognitive congruence. The participants remarked on their ability to take their opinions and difficulties into consideration and adjust their teaching accordingly, which is particularly useful when aiming to be mindful of the students' autonomy (Reeve, 2016). Autonomy support can also enhance engagement (Fredricks et al., 2004), thus the positive engagement outcomes participants of the present study reported for sessions with their student mentors, may in part be due to the mentors' skill in autonomous supportive teaching.

Autonomous supportive teaching has been consistently associated with numerous positive outcomes for students, including higher engagement. Moreover, autonomous supportive teaching extends beyond the scope of the present study, encompassing benefits such as improved academic outcomes, positive classroom functioning, and enhanced student well-being (Reeve, 2016). This lends support to the idea that autonomous supportive teaching should be encouraged which makes it even more important to further study the idea that student mentors may have inherent abilities to effectively adapt to this teaching practice.

Future studies could aim to explore these additional outcomes within the context of student mentoring. It is important to acknowledge that academic learning is a complex process influenced by various factors, and while engagement is a vital aspect, it represents only one part of achieving successful learning and optimal classroom functioning. Therefore, future investigations should adopt a comprehensive approach to examine the full impact of student mentoring on academic achievement, classroom dynamics, and student well-being.

The more controlling teachers on Reeve's (2016) bipolar continuum use pressure to get students to comply and prescribe what students are to think, feel or do. This is rather similar to the way participants described their faculty mentors since they reported feeling more intimidated and complying with rules due to a more disciplined and stricter teaching style. The Participants especially emphasized that those factors lowered their affective engagement as they experienced more negative emotions such as frustration, anxiety, and lower confidence and interest. Reeve (2016) has similar conclusions and describes that this controlling style lowers student's inner motivation and leads to lower well-being and higher need frustration.

However, in contrast to those negative findings about controlling teaching styles, the participants in the present study also described how pressure by the faculty mentor and being held accountable helped them not to procrastinate and to get ahead on tasks, which suggests that there are some instances where more controlling teaching could be beneficial for behavioral engagement. Those findings are in line with Boss et al. (2021) who reported that too much autonomy and too little autonomy can lead to worse performances. Participants in their study that had a medium level of autonomy showed the highest performances. Therefore, a mixture of the teaching style of student mentors that emphasize autonomy and the faculty mentors that are more controlling may lead to the best outcomes (Boss et al., 2021).

The present study also found some unexpected trends during the inductive analysis. Based on the students' descriptions, the academic skills course worked especially well because it included both faculty mentoring and student mentoring. The mentors seem to have strengths and weaknesses in different areas and were often able to balance each other's weaknesses out to optimally support the students. Some student needs were better met by the faculty mentor and others by the student mentor. This is in accordance with the findings of DeCastro et al. (2013) who emphasize the importance of having mentor networks instead of relying on one mentor for each student as it is almost impossible to find mentors that can satisfy the diverse needs of students all at once. Therefore, it may make sense to rely on different mentors to cater to different requirements. To enable successful learning, it is necessary for the teacher to navigate a careful line in how much autonomy to provide (Boss et al., 2021). Thus, student mentors, who were found to give the students too much freedom in some instances, and faculty mentors, who tend to be too controlling, may also balance each other out in this regard. Based on the current study, a mixture of faculty and student mentors may be especially useful to establish comprehensive support systems that effectively address the complex challenges faced by students. This approach acknowledges the unique perspectives and expertise offered by both faculty and student mentors and embraces their collaborative effort to enhance the mentoring experience of students (Altonji et al.,2019).

Implications for Practice

Based on the findings, it can be suggested that the use of student mentors does have positive benefits. First year students especially will benefit from the student mentor's greater cognitive congruence to help them adjust to the academic environment (Altonji et al., 2019). In their student mentors the students may find a guide that has enough experience to help them. However, their knowledge framework is still similar enough that they can give accessible explanations that students who are new to academics may understand (Loda et al.,

2020). However, while the students reported that the enhanced cognitive congruence of student mentors positively influenced their affective and behavioral engagement in some regard, it was not always seen as beneficial. Faculty mentors had characteristics that were more beneficial for the students in some instances. This includes their higher expertise and more disciplined teaching style. Therefore, courses like the ‘Academic Skills’ course of the present study where the students are taught by a student mentor and a faculty mentor may be especially good for increasing engagement since the students will be able to benefit from the strengths of both mentors. Further, the combination of the student mentors more autonomous teaching and the faculty mentors more controlling style (Reeve, 2016) may enable them to find the optimal level of autonomy to increase performance (Boss et al., 2021) The mentors may be able to compensate for each other’s weaknesses and address a greater variety of student needs (DeCastro et al., 2013). To further make use of their combined strengths, courses like ‘Academic Skills’ should incorporate more sessions where both mentors are present at the same time to address different needs instead of having mostly separate sessions with each mentor.

The present study also provides information about the specific behaviors of student mentors that the students perceive to increase cognitive congruence. This may be beneficial for interventions aiming to improve faculty mentoring by teaching them to apply behaviors to increase their cognitive congruence. For instance, interventions can emphasize the importance of using clear and simple language, as well as cultivating a heightened awareness of students' existing knowledge frameworks and potential difficulties they may face (Lockspeiser et al., 2006; Loda et al., 2020). By integrating these behaviors into faculty mentoring practices, mentors can enhance their ability to establish cognitive congruence, thereby improving their interactions with students. Additionally, the mentors could be taught about autonomous supportive teaching and what concrete behaviors it requires to enhance the learning

experiences of students. Ultimately, these interventions have the potential to improve the overall quality and impact of faculty mentoring, which may make the students more comfortable with the faculty mentor, improve the accessibility of explanations and ease the students transition into the academic environment (Altonji et al., 2019). Those additional skills the faculty mentors could be taught may be especially useful in problem-based learning as it would allow them to guide the students more efficiently through their self-directed learning, know when to intervene and what kind of help to offer to direct the students in the right direction (Cianciolo et al., 2016; Lockspeiser et al., 2006; Schmidt & Moust, 1995).

Limitations

Based on the present study, it is not possible to draw conclusions about student mentoring at universities in general. The sample is too small, and all participants are psychology students from the same university (Loda et al., 2020). To increase generalizability, future studies should have a greater sample size that includes students with a variety of majors from different universities. Additionally, the present study only looks at cognitive congruence, which is merely one teacher characteristic that could influence engagement and may differ between student and faculty mentors. Previous research shows that social congruence, the mentors' ability to relate to students on a personal level, and the mentors subject matter expertise are other factors that should be considered in that regard (Yew & Yong, 2013). Further studies should examine all three of those aspects to get a more complete picture of student and faculty mentors' characteristics and how they influence students.

The qualitative nature of the present study made it possible to gather in-depth information about the experiences and opinions of a few students (Loda et al., 2020). However, a study based on interviews is not suited to assess the nature of the association between the different factors. A study using quantitative measures could give greater insight

into that. A potential future study that aims to explore the causal relationship between cognitive congruence and engagement could employ experimental methods. In such a study, participants could be randomly assigned to various conditions, including groups that receive lessons from student mentors, faculty mentors, both mentors, and a control group. After the duration of the study various outcomes in the participants, including engagement, could be assessed, allowing for a clearer understanding of the relation between the type of mentor and different outcomes.

Furthermore, researcher bias may have had an influence on the interviewing process and the data analysis. Researchers inevitably bring their own beliefs, assumptions, and perspectives into the study, making it challenging to completely eliminate bias (Johnson et al., 2020). And despite taking certain measures to minimize researcher bias, like self-reflection and frequent peer-reviewing, it is important to recognize that some degree of bias could still have influenced the results.

Conclusion

Overall, the present study made a valuable contribution to the ongoing research into student mentoring because the qualitative approach made it possible to examine the students' opinions very closely and get an in-depth view into their experiences (Jones, 2022). The findings are in line with previous studies that found student mentors to be higher in cognitive congruence (Loda et al., 2020; Lockspeiser et al., 2006). Since the students reported their student mentors to have a positive influence on their affective and behavioral engagement, it is reasonable to support the recent trend for universities to use more student mentoring. However, based on the students' experiences, it may be useful to have the student mentors always be supported by faculty mentors (Altonji et al., 2019) as there are certain needs of students that were described to be better met by a more experienced mentor. This approach will allow the different mentor types to work together and use their individual strengths to

meet a greater variety of students' learning needs than either one would have been able to meet on their own (Altonji et al., 2019).

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Appendix A

Interview Questions – Version 1

Introduction:

- Get them comfortable with questions like: Did you find your way here well? What do you think of the psychology program so far? How do you like living in Groningen?
- Confidentiality
- Sign the informed consent
- 10 days to email that they want the recording deleted
- Ask them if it's okay to record the interview
- They can stop at any time
- Interview is about an hour

Broad starter question

- What did you think about the course?
- How did you like your class?

Questions concerning cognitive congruence

Cognitive congruence refers to the ability to express oneself in a language students can understand, using concepts they use and explaining concepts in ways easily grasped by students (Schmidt & Moust, 1995)

- What did you think about the explanations of the mentors? How did they compare? Whom did you prefer? Why?
- What did you prefer about the way your mentors communicated during the explanations, and why? What did you not like as much? Whom did you prefer?
- How understandable was the language that the tutor used? How did the mentors compare? What did you prefer and why? How did they use terminology?

- How did the mentors explain difficult topics? Were they able to break down difficult concepts into simpler ones? How did they compare? Whom did you prefer and why?
- To what extent were your mentors capable of understanding your academic problems? How did they differ from each other in this regard? Whom did you prefer and why?

* Short intro what we talked about and what it does to engagement*

- we have talked about the language that your tutors used to explain the material
- let's focus on the consequences that it might have had on you

Engagement questions

cognitive engagement

- How did your mentors' explanations of difficult topics influence your motivation to learn?
- How did your mentors' skill of explaining topics influence your ability to understand the course material? What about your ability to take on challenging tasks? Why do you believe so?

affective engagement

- How did your mentors' way of explaining difficult topics make you feel during class?
- How did your mentors' teaching style influence your sense of belonging and connectedness to the class environment?
- To what extent, do you believe that your mentors' understanding of your academic struggles influence your emotions, feelings, and attitudes towards the class?

behavioural engagement

- How did your mentors' way of leading discussions influence the extent to which you participated in class? What made you participate?
- How does your mentors' way of presenting the material influence your desire to follow the class rules? (attendance, positive conduct, effort)

Questions concerning social congruence:

Social congruence refers to a teacher's personal interest in or concern for his/her students

- How much do you believe your mentors showed care for their students?
    - Can you provide an example of this?
    - Were there any differences between the two and whom did you prefer? Why?
- How approachable were each of your mentors? How did they differ from each other? Why do you believe so? Whom did you prefer in this aspect and why?
- In what ways did your mentors display empathy and emotional support towards you? Were there any differences between their competence in these matters? Why?
- How did your mentors show interest in their students? Yes, in terms of their personal lives and well-being? Were there any differences between the two?
- How did your mentors express praise and criticism? How much did they acknowledge the effort you had put into the work? How did this compare to the other mentor? Whom did you prefer and why?
- Overall, what do you and your mentors have in common? In what ways are they 'like you'? What makes you say this? Were there any differences between the two? Why do you think so? Whom did you prefer, regarding this?

Short intro what we talked about and what it does to engagement*

- We have already talked about tutors' interest in your personal life etc.
- let's focus on the consequences that it might have had on you

Engagement questions

cognitive engagement

- In what ways do you believe that your mentor's interest in your personal life impacts your motivation to learn? How did having experiences in common influence your motivation?

- How did the extent to which your mentors' encouraged collaboration influence your ability to understand the course material? What about your ability to take on challenging tasks? Why do you believe so?

affective engagement

- During the lessons, how did your mentor's interest in your personal life make you feel?
    1. How did that influence your attitudes towards the class?
- How did your teachers' concern for you influence your sense of connectedness to the class environment?

behavioural engagement

- What influence did the mentor's interest in the students personal lives, and emotional support, have on the extent to which you participated in class?
- How did your mentor's relationship with you affect your desire to follow the class rules? (attendance, positive conduct, effort)

Interview Questions – Version 2

Introduction:

- Get them comfortable with questions like: Did you find your way here well? What do you think of the psychology program so far? How do you like living in Groningen?
- Confidentiality
- Sign the informed consent
- 10 days to email that they want the recording deleted
- Ask them if it's okay to record the interview
- They can stop at any time
- Interview is about an hour
- We will ask about your experiences with the course, Academic Skills, and your student and faculty mentors.

Broad starter question

- What did you think about the course?
- How did you like your class?

Questions concerning cognitive congruence

Cognitive congruence refers to the ability to express oneself in a language students can understand, using concepts they use and explaining concepts in ways easily grasped by students (Schmidt & Moust, 1995)

- What did you like about the way your mentors communicated? What did you not like as much? Whom did you prefer? Why?
- What did you think about the explanations of the mentors? How did they compare? Whom did you prefer? Why?
- How understandable was the language that the tutor used? How did the mentors compare? What did you prefer and why? How did they use terminology?

- How did the mentors explain difficult topics? Were they able to break down difficult concepts into simpler ones? How did they compare? Whom did you prefer and why?
- To what extent were your mentors capable of understanding your academic problems? How did they differ from each other in this regard? Whom did you prefer and why?

* Short intro what we talked about and what it does to engagement*

- we have talked about the language that your tutors used to explain the material
- let's focus on the consequences that it might have had on you

Engagement questions

cognitive engagement

- How did your mentors' explanations of difficult topics influence your motivation to learn?
- Earlier we asked you how your mentors explained difficult topics. In that regard, how did this affect your confidence in your ability to understand the course material? What about your confidence in your ability to take on challenging tasks? Why do you believe so?

affective engagement

- How did your mentors' way of explaining difficult topics make you feel during class?
- How did your mentors' teaching style influence your sense of belonging and connectedness to the class environment?
- Going back to obstacles that you faced throughout the course, how did your mentor's understanding of these struggles influence your emotions, feelings, and attitudes towards the class?

behavioral engagement

- How did your mentors' way of leading discussions influence the extent to which you participated in class? What made you participate?

- How does your mentors' way of presenting the material influence your desire to follow the class rules? (attendance, positive conduct, effort)

Questions concerning social congruence:

Social congruence refers to a teacher's personal interest in or concern for his/her students

- How much do you believe your mentors showed care for their students?
    - Can you provide an example of this?
    - Were there any differences between the two and whom did you prefer? Why?
- In what ways did your mentors display empathy and emotional support towards you? Were there any differences between their competence in these matters? Why?
- How approachable were each of your mentors? How did they differ from each other? Why do you believe so? Whom did you prefer in this aspect and why?
- How did your mentors show interest in their students? Yes, in terms of their personal lives and well-being? Were there any differences between the two?
- How did your mentors express praise and criticism? How much did they acknowledge the effort you had put into the work? How did this compare to the other mentor? Whom did you prefer and why?
- Overall, what do you and your mentors have in common? In what ways are they 'like you'? What makes you say this? Were there any differences between the two? Why do you think so? Whom did you prefer, regarding this?

Short intro what we talked about and what it does to engagement*

- We have already talked about tutors' interest in your personal life etc.
- let's focus on the consequences that it might have had on you

Engagement questions

cognitive engagement

- In what ways do you believe that your mentor's interest in your personal life impacts your motivation to learn?
- Earlier, you talked about what you had in common with the mentors. How did having these experiences in common influence your motivation to learn?
- How did the extent to which your mentors' encouraged collaboration influence your ability to understand the course material? What about your ability to take on challenging tasks? Why do you believe so?

affective engagement

- During the lessons, how did your mentor's interest in your personal life make you feel?
    1. How did that influence your attitudes towards the class?
- How did your teachers' concern for you influence your sense of connectedness to the class environment?

behavioral engagement

- What influence did the mentor's interest in the students personal lives, and emotional support, have on the extent to which you participated in class?
- How did your mentor's relationship with you affect your desire to follow the class rules? (attendance, positive conduct, effort)

Interview Questions – Version 3

Introduction:

- Get them comfortable with questions like: Did you find your way here well? What do you think of the psychology program so far? How do you like living in Groningen?
- Introduce everyone and explain what they will do (especially the one taking notes)
- Confidentiality
- Sign the informed consent
- 10 days to email that they want the recording deleted
- Ask them if it's okay to record the interview
- They can stop at any time
- Interview is about an hour
- We will ask about your experiences with the course, Academic Skills, and your student and faculty mentors.

Broad starter question

- What did you think about the course?
- How did you like your class?

Questions concerning cognitive congruence

Cognitive congruence refers to the ability to express oneself in a language students can understand, using concepts they use and explaining concepts in ways easily grasped by students (Schmidt & Moust, 1995)

- What did you like about the way your mentors communicated? What did you not like as much? Whom did you prefer? Why?
- What did you think about the explanations of the mentors? How did they compare? Whom did you prefer? Why?

- How understandable was the language that the tutor used? How did the mentors compare? What did you prefer and why? How did they use terminology?
- How did the mentors explain difficult topics? Were they able to break down difficult concepts into simpler ones? How did they compare? Whom did you prefer and why?
- To what extent were your mentors capable of understanding your academic problems? How did they differ from each other in this regard? Whom did you prefer and why? How did you find the individual meeting with your faculty mentor?

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Engagement questions

cognitive engagement

- How did your mentors' explanations of topics influence your motivation to learn? How was your motivation different after a meeting with your student mentor or with your faculty mentor?
- Earlier we asked you how your mentors explained difficult topics. In that regard, how did this affect your confidence in your ability to understand the course material? What about your confidence in your ability to take on challenging tasks? Why do you believe so?

affective engagement

- How did your mentors' way of explaining topics make you feel during class?
- How did your mentors' teaching style influence your sense of belonging and connectedness to the class environment?

- Going back to obstacles that you faced throughout the course, how did your mentor's understanding of these struggles influence your emotions, feelings, and attitudes towards the class?

behavioral engagement

- How did your mentors' way of leading discussions influence the extent to which you participated in class? What made you participate?
- How does your mentors' way of presenting the material influence your desire to follow the class rules? (attendance, positive conduct, effort)

Questions concerning social congruence:

Social congruence refers to a teacher's personal interest in or concern for his/her students

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