The Role of Student- and Faculty Mentors` Immediacy Behavior in Promoting Students`

Sense of Belongingness and Intellectual Risk-Taking

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Abstract

This study examines the role of mentors` immediacy behavior, by student mentors (SM) and by faculty mentors (FM), and the impact it has on the sense of belongingness (SoB) and intellectual risk-taking (IRT) of first-year psychology students at the University of Groningen. The study used a cross-sectional, correlational design to assess the impact of verbal and nonverbal immediacy behaviors on the two outcome variables, within a sample of 180 students. The results revealed a significant positive correlation between overall mentor immediacy and students' SoB, with SM immediacy showing a stronger effect compared to FM immediacy. Contrary to our expectations, overall mentor immediacy did not significantly predict student IRT. However, the unique contribution of SM immediacy had a significant effect on the students` SoB. An additional exploratory analysis indicated that SoB mediates the relationship between SM immediacy and IRT. The study`s findings highlight the important role of peer mentoring programs (PMP) and also of training faculty mentors in immediacy behaviors and community-building skills to create a more engaging academic environment. Future research could focus on including more diverse samples and longitudinal approaches to better understand the dynamics influencing SoB and IRT and the role of SMs and FMs.

Keywords: student mentor, faculty mentor, mentor immediacy, intellectual risk-taking, sense of belongingness

The Role of Student- and Faculty Mentors` Immediacy Behavior in Promoting

Students` Sense of Belongingness and Intellectual Risk-Taking

Today`s educational environment is often dominated by performance-oriented systems and teaching methods which strongly impact students` learning processes. The focus on quantifiable success often creates a competitive environment that pressures the students to perform academically and thereby often undermines their intellectual engagement and sense of community. As Amrein and Berliner (2002) point out, the educational institutions` emphasis on high-stakes testing and narrow metrics of success frequently result in a superficial level of understanding and also undermine the students` holistic learning experiences. Additionally, by valuing intelligence over effort, such a learning environment can create a fear of failure that might discourage students` intellectual risk-taking (IRT) and reduce their willingness to face academic challenges (Mueller and Dweck, 1998). Moreover, such a performance-oriented system often promotes individualism at the expense of community and collaboration, thereby working against a sense of belongingness (SoB) in the classroom. All these factors work together to create a classroom setting in which intrinsic motivation and community involvement often come short in favor of measurable results and evaluation (Ryan & Deci, 2000), having a substantial negative impact on students' SoB and IRT development.

Need for Mentors

Looking at the challenges in our performance-oriented educational system, it is crucial to explore the role of mentors in higher education, whose guidance and support is often of great value to the student's learning experience and thereby counteracts these negative trends (Lunsford et al., 2017). The symposium by Johnson (2015) describes how mentors can serve as professional role models who model positive behavior, promote professional identity development, and facilitate environments that encourage academic exploration. In addition to

fostering positive effects, mentoring relationships have been demonstrated to reduce levels of psychological distress and protect from interpersonal difficulties during periods of high stress (Short et al., 2020). Consequently, mentors serve as a potential source of well-being among undergraduate students (Kutsyuruba & Godden, 2019).

As outlined by Lunsford et al. (2017), mentorships may take a variety of forms that vary in duration, function, and source. While research has shown that mentees with higher access to multiple kinds of mentors have recorded better motivational and learning outcomes (Aikens et al. 2016), most of the research regarding mentoring tends to explore the effects of one specific form of mentoring at a time. This study will explicitly explore the niche of comparing the unique effect of two different types of mentoring, namely student- and faculty mentoring, within the same classroom.

Student mentoring is a form of mentoring in which students are paired with mentors who are at similar stages of their academic careers. This proximity in experience allows SMs to provide direct and empathic help since they themselves have lately faced comparable academic challenges. Therefore, this kind of mentoring has the potential to create and foster a learning environment that is marked by inclusivity and collaboration (Reeves et al., 2018).

Faculty mentoring, on the other hand, connects students with mentors who are professors, PhD- students or hold another teaching-related role at the undergraduate level, thus providing a wealth of knowledge and experience. This setup is thought to assist the students in developing their academic self-concepts, which includes professional and academic growth, thus increasing their motivation and academic achievements (Komarraju et al., 2010). It is important to acknowledge the distinct benefits of each mentoring style which target different aspects of the student`s development, yet they may coexist, as shown in our study's framework. This study will look at the distinct effects of immediacy behavior from

both SMs and FMs, as well as how these mentoring qualities contribute to a student's SoB and IRT.

Mentor Immediacy

While it seems that mentorship can counterbalance the intense focus on hard skills (Reeves et al., 2019; Amrein and Berliner, 2002), the mechanisms of the relationship between mentors and positive student outcomes are not fully understood. It might be that mentor immediacy behavior contributes to creating a safe psychological space which in turn might facilitate the effective acquisition of hard skills. Mentor immediacy is defined as the perceived closeness, both physical and psychological, that students feel towards their instructors (Mehrabian, 1971). In the context of education, immediacy is manifested and is communicated in two ways: through explicit or verbal communication, which transmits the content of a message, and implicit or nonverbal communication, which conveys emotions and underlying feelings (Richmond et al., 2006). For the sake of this study, we conceptualize immediacy as a whole. Immediacy is initially conceptualized as a set of behaviors intended to reduce perceived distance and enhance relational closeness by reflecting positive feelings and increasing sensory engagement between communicators (Mehrabian, 1971). McMahon (2020) defines rapport-building and warmth as being important parts of instructor immediacy and emphasizes their significant positive impacts on student motivation and attention levels in class. Additionally, Voelkl (1995) integrates caring and affection into the concept of instructor immediacy and found a positive correlation with students` feelings of happiness and enthusiasm in class. All these findings show the considerable positive influence that mentors' immediacy can have on the classroom environment and the student's learning process.

Sense of Belongingness

SoB is often conceptualized as the fundamental human need to feel accepted and included within a community or group. It is what motivates people to establish and maintain

meaningful, long-lasting interpersonal relationships, which are defined by frequent, positive interactions and a stable foundation of shared concern (Baumeister & Leary, 1995). This need is essential because it determines emotional and cognitive processes, which affect overall well-being and health.

According to Kunc (1992), and drawing from Maslow's hierarchy, the need to belong must be met before individuals can develop self-esteem and achieve their full potential. Additionally, SoB and the feeling of being a valued member of your social environment serves as a prerequisite for developing motivation, and the needs for knowledge and understanding (Maslow, 1962; Kunc, 1992). This also translates to domain-specific influence, such that the SoB in the classroom should enhance motivation and engagement in that specific context (Goodenow, 1993). In academic settings, SoB has been classified and studied at various levels of conceptualization, including class belonging, professor's pedagogical caring, social acceptance, and university belonging (Du et al., 2023). In this study, we will specifically examine students' SoB within the classroom.

In general, as outlined by Holloway-Friesen (2019), mentored students felt more connected to their academic community compared to their unmentored peers. But what kind of mentor behavior is relevant regarding enhancing students` SoB? In this study, we specifically looked at the role of mentor immediacy in enhancing students` SoB. Literature that explored this relationship in higher education seems to be scarce. Kirby & Thomas (2021), however, found caring and supportive teacher behavior, both aspects of immediacy behavior, to be significant predictors of a classroom community characterized by feelings of connectedness. Additionally, mentor support, including emotional support, modeling behavior, and informational and experiential support, significantly predicted a sense of school belonging in high school students (Sánchez et al., 2008). In the context of the elementary school classroom, Solomon et al. (1996) found teacher practices, such as demonstrating

warmth and supportiveness, to be positively related to student classroom behaviors such as engagement, influence, and positive behavior which, in turn, were linked to students' SoB. By applying attributes like warmth, openness, and active participation and making the student feel seen, heard, and respected, the mentor`s immediacy might provide a firm foundation for a SoB in the classroom (Freeman et al., 2007).

As previously mentioned, there is little research comparing the roles and effects of SMs and FMs in the same classroom. However, considering the similarity and proximity that SMs offer the students, as well as the empathetic guidance through which they create inclusivity and collaboration (Reeves et al., 2018), SM immediacy might be especially important in promoting students' SoB. In line with this hypothesis are the findings by Paolucci et al. (2021), who found that student mentorship in graduate programs enhanced student well-being by fostering social connectedness, SoB, increased opportunities for emotional support, and improved academic motivation. By highlighting that student mentoring significantly reduces perceived loneliness and instead increases the psychological SoB among first-year nursing students, Raymond and Sheppard`s (2017) findings further support the link between student mentoring and students' SoB.

Intellectual Risk-Taking

IRT, the second outcome variable of this study, refers to the willingness to engage in activities that may expose the learner to the possibility of making mistakes or appearing less competent than others. More specifically, those activities include sharing tentative ideas, exploring unfamiliar topics, asking questions, trying new methods, and attempting to learn new things (Beghetto, 2008; Clifford, 1988). Although sharing one's ideas during a class discussion is an adaptive learning behavior, students may be hesitant to do so due to fear that their ideas might be dismissed, discounted, or even ridiculed. This fear of failure, of being judged, was found to be most pronounced in school-based settings (Clifford, 1991) in which

formative assessment and comparison add extra pressure to the students (Mueller and Dweck, 1998). Yet, when IRT occurs despite these fears, it greatly enhances students' educational experience. IRT plays a vital role in student learning and the development of academic identity (Streitmatter, 1997; Wan et al., 2021). When students are willing to share and test their own ideas, they engage in a self-motivated process that extends and strengthens their cognitive structures and is essential for becoming a self-regulated learner. Furthermore, STEM students high in IRT were found to display more creative thinking in their field of study (Wan et al., 2021). According to Allmond et al. (2016), by welcoming and fostering IRT, a classroom culture leads to considerable improvements in how students manage setbacks and respond to feedback from their peers.

Given the numerous benefits of students displaying IRT in the classroom on the one hand and its noticeable lack of education on the other hand (Beghetto, 2008), it is critical to investigate the factors that influence students' willingness to engage in IRT. Considering the limited and mixed findings of previous research on these factors, this study aims to fill this gap by investigating the role of mentors` immediacy behavior on students' IRT. Although there appears to be no research to date directly linking mentor immediacy behavior and students' IRT, findings by Roberts and Friedman (2013) suggest that teacher immediacy behavior is positively associated with both greater frequency and breadth of classroom participation. Additionally, the overall quality of students' relationships with their teachers is significantly linked to their sense of autonomy, personal control, and active engagement in school (Ryan et al., 1990). Beghetto (2008) specifically found that students' perceptions of a supportive teaching style, including attentive listening and active encouragement, are positively related to students' IRT behavior. Based on these findings, this study specifically looks at the role of mentor immediacy in enhancing students' IRT.

But what type of mentor has a stronger effect on students' IRT through displaying immediacy behavior? Makhamreh and Stockley (2019) found that positive behaviors and attitudes of FMs, such as being empathetic and patient, made students more confident in sharing their thoughts and stepping out of their comfort zones. Furthermore, Aikens et al. (2016) demonstrated that undergraduates mentored solely by faculty, as opposed to those with postgraduate mentors or no mentors, generally reported better outcomes in thinking and working like scientists, as well as in scientific self-efficacy. Faculty mentoring, being especially suited for providing meaningful and constructive feedback and facilitating scholarly conversations, has been positively associated with students' curiosity, intellectual engagement, and commitment (Lim & Kim, 2023). All in all, these findings suggest that FMs play a significant role in enhancing students` IRT in the classroom.

Hypothesis

Given this research setup and previous findings regarding this study`s variables, we propose the following hypothesis:

H1: There is a significant positive relationship between mentor immediacy and student SoB.

H2: There is a significant positive relationship between mentor immediacy and student IRT.

H3: SM immediacy is expected to have a significantly stronger effect on students` SoB than FM immediacy.

H4: FM immediacy is expected to have a significantly stronger effect on students' IRT than SM immediacy.

Methods

Participants

To be eligible, participants had to be Psychology students of the University of Groningen, who are currently enrolled in a first-year practical course where they have a SM and a FM. Participants were recruited using a convenience sampling method as the study was

part of the SONA program, in which students get credits for a university course in return for engaging in research. Additionally, participants were recruited using a snowball sampling method where students referred each other to fill out the questionnaire which was available on Qualtrics. To achieve the desired sample size the link to the Qualtrics survey was shared in social media groups that included the target group. Initially, our study involved 224 participants, of whom 44 were excluded. Among the excluded participants, 21 were omitted because they did not complete the survey, seven did not meet the inclusion criteria, two were previews submitted by our team, and the remaining 13 individuals were excluded due to not allocating sufficient time to complete the survey (i.e., less than 500 seconds). A final of 180 participants were included in the study, out of which 127 identified as female, 47 as male, two as other, two preferred not to share this information, and the remaining two skipped the question. The minimum age in our sample is 17, while the oldest participant is 35 years old *(M = 19.77, SD = 1.96)*. Furthermore, the participants were asked to share their nationalities with 117 of them stating to be Dutch, 17 stating to be German, and 46 belonging to another culture.

Material

The study included three scales in total. This paper was a part of a larger project for the bachelor thesis.

Immediacy

To assess students' perceptions of immediacy behaviors exhibited by both FM and SM, Kwitonda's (2017) verbal and non-verbal immediacy scales were merged into one immediacy scale. Originally, Kwitonda´s (2017) scale utilized a total of 23 items, 9 were excluded based on face validity. In total, 14 items were used to assess mentors´ immediacy behaviors, with six items focusing on nonverbal immediacy behaviors and the remainder evaluating verbal immediacy behaviors. Examples of items from the nonverbal immediacy

scale included statements such as "Has a very relaxed body position while talking to the class", and "Moves around the classroom while teaching", while items from the verbal immediacy scale included statements such as "Uses humor in class" and "Gets into conversations with individual students before or after class". Each immediacy item was presented twice to enable separate assessments of FM's and SM`s immediacy behaviors. Responses were recorded using a 5-point Likert scale, ranging from *never* to *always*. Overall, the instrument is a standard questionnaire for assessing immediacy behaviors in an educational setting and has been shown to be a valid and reliable measure, yielding a strong coefficient of 0.72.

Sense of Belonging

To gauge students' SoB within their class, we utilized the Classroom Community Scale (CCS), adopted from Rovai (2002). While this instrument originally comprised two subscales, the Learning subscale, and the Connectedness subscale, we focus solely on the latter subscale in this study. Through a process of face validity assessment, it was determined that isolating the Connectedness subscale better aligns with the objectives of our project. A total of 10 items were employed to evaluate students' sense of belonging, including statements such as "I feel connected to others in this course", "I feel uncertain about others in this course", "I feel confident that others will support me". Each item was rated using a 5-point Likert scale, ranging from *strongly disagree* to *strongly agree*. Overall, the CCS is regarded as an instrument that reliably measures students´ SOB, yielding an alpha coefficient of 0.86 in this project.

Intellectual risk-taking

A 5-point Likert scale was used to assess students' IRT in class, with 5 items ranging from *definitely not* to *definitely yes*. It was taken from the study by Beghetto (2008). Statements, such as "In class, I like doing new things even if I am not very good at them", "In

class, I try to learn new things even if I might make mistakes", and "In class, I ask questions even if other students will think I am not as smart as them" were included. Higher scores denote more IRT behavior. The Cronbach`s-alpha is 0.8, making it a reliable measure.

Procedure

This study used a cross-sectional, correlational, observational design to examine the proposed relationship between mentor immediacy and students` SoB and IRT. This study was part of a larger bachelor thesis project and was approved by the Faculty Ethics Committee. Data were collected via an online survey created by Qualtrics (Qualtrics, Provo, UT). Students were invited to participate in the research on the SONA system (Sona Systems, n.d.) or via Qualtrics directly. Initially, the survey was only available through the SONA project. However, to reach the desired sample size, we relied on the snowball sampling method and shared the Qualtrics link with the groups of students who matched our inclusion criteria. The choice to participate was voluntary and there was no monetary compensation. The only remuneration involved was for students who accessed the survey through SONA as they received credits required to pass a course.

The primary prerequisite for participation was that participants had to confirm that they were psychology students enrolled in the Academic Skills course. Only those who met this requirement were able to proceed. Before starting the questionnaire, participants were presented with detailed information regarding the study's objectives and procedures. They received information outlining the research's aim to investigate participants' perceptions of mentoring experiences and personal values. Participation in the research was voluntary, and participants' informed consent was required. They were encouraged to carefully read the provided information and to address any questions before providing consent. Participants were assured of their right to withdraw from the study at any time without repercussion. Upon consenting, participants were then asked to provide demographic information such as gender,

nationality, and age, before proceeding to complete a series of questionnaires covering topics such as perceptions of mentoring in the Academic Skills course. Each participant filled out the same questionnaire in a fixed order and the estimated completion time for the questionnaire was approximately 20 - 30 minutes.

Results

Assumptions

All assumptions of the linear regression models, which were used to examine the four hypotheses, were satisfied, hence the chosen analyses were appropriate and valid.

Descriptive Statistics

Means, standard deviations, and pairwise correlations for students' SoB, students' IRT, FM immediacy, and SM immediacy are presented in Table 1.

Table 1

Descriptive Statistics

	1	2	3	4	Mean	Std. Deviation
1 SoB	-				32.71	5.99
2 IRT	.321**	-			16.67	3.7
3 FM_Immediacy	.065	-.003	-		48.98	8.21
4 SM_Immediacy	.392**	.160*	.408**	-	52.36	6.23

a) *FM_Immediacy = Faculty mentor Immediacy and SM_immediacy = Student mentor immediacy*

b) *SoB = student sense of belongingness and IRT = student intellectual risk-taking*

c) ** = p<.05; ** = p<.001*

Simple Linear Regression Analysis

Hypothesis 1: There is a significant positive correlation between mentor immediacy and student SoB.

We conducted a simple linear regression analysis with overall immediacy- including FM and SM immediacy- as a predictor variable and student SoB as the outcome variable. The overall regression model was significant, (F(2, 174) = 17.25, p < .001), indicating that the predictors explained a significant proportion of the variance in students' SoB (see Table 2).

Table 2

ANOVA[a] (for SoB)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1043.93	2	521.96	17.25	<.001[b]
	Residual	5266.38	174	30.27		
	Total	6310.31	176			

    a) *Dependent Variable: SoB*

    b) *Predictors: (Constant), FM_Immediacy, SM_Immediacy*

Hypothesis 2: There is a significant positive correlation between mentor immediacy and student IRT.

A separate simple linear regression analysis was conducted, which contained overall immediacy, including FM and SM immediacy, as predictor variables, and student IRT as the outcome variable. The regression model for this hypothesis was not significant, suggesting that the predictors did not explain a significant proportion of the variance in students' IRT (see Table 3).

Table 3

ANOVAª (for IRT)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	76.18	2	38.09	2.84	.061[b]
	Residual	2375.48	177	13.42		
	Total	2451.66	179			

a) *Dependent Variable: IRT*

b) *Predictors: (Constant), SM_Immediacy, FM Immediacy*

Hypothesis 3: SM immediacy is expected to have a significantly stronger effect on students`

SoB than FM immediacy.

The results showed that SM immediacy was a significant positive predictor of

students' SoB, (B = .423, p < .001), while FM immediacy was not a significant predictor (see

Table 4). These results indicate that SM immediacy explains a significant proportion of the

variance in SoB, whereas FM immediacy does not.

Table 4

Coefficientsª

Model	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
SM_Immediacy	.423	.07	.44	5.8	<.001
FM_Immediacy	-.086	.06	-.12	-1.55	.124

a) *Dependent Variable: SoB*

Hypothesis 4: FM immediacy is expected to have a significantly stronger effect on students' IRT than SM immediacy.

The coefficients table for the second model indicated that SM immediacy was a significant positive predictor of students' IRT, (B = .115, p = .018), while FM immediacy was no significant predictor (see Table 5). These findings contradict our hypothesis and show that SM immediacy significantly contributes to the model, whereas FM immediacy does not.

Table 5

Coefficients[a]

Model	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
FM_Immediacy	-.037	.04	-.08	-1.01	.315
SM_Immediacy	.115	.05	.19	2.38	.018

a. *Dependent Variable: IRT*

Exploratory Analysis

As H4 was not supported, we conducted an explorative analysis to further examine predictors of students' IRT. More exactly, we looked at the role of student SoB as a mediator of the relationship between mentor immediacy and student IRT. To test this relationship, a simple mediation analysis was conducted using Model 4 of Hayes' PROCESS (2013). A separate analysis was conducted for FM- and SM immediacy respectively. When the

bootstrapped confidence interval does not contain a zero, then a statistically significant effect of the model including the mediator has been observed.

The assumptions for the analysis were validated by using a bootstrapping approach to ensure the normality of the data and the HC4 (Cribari-Neto) assumption to assume a robust standard error and thus meet the homoscedasticity criteria.

The mediation analysis of the relationship between SM immediacy and student IRT through student SoB revealed a significant effect (effect = 0.01, SE = 0.1, 95% CI [-0.01, 0.03]) (see Figure 2). Paired with an insignificant direct effect of SM immediacy and student IRT in the presence of student SoB, a full mediation effect of student SoB on the relationship between FM immediacy and student IRT has been identified. In the relationship between FM immediacy and students' IRT, student SoB was found to have neither a significant partial nor a significant full mediation effect.

Figure 1

Mediation model: SM Immediacy on IRT through SoB
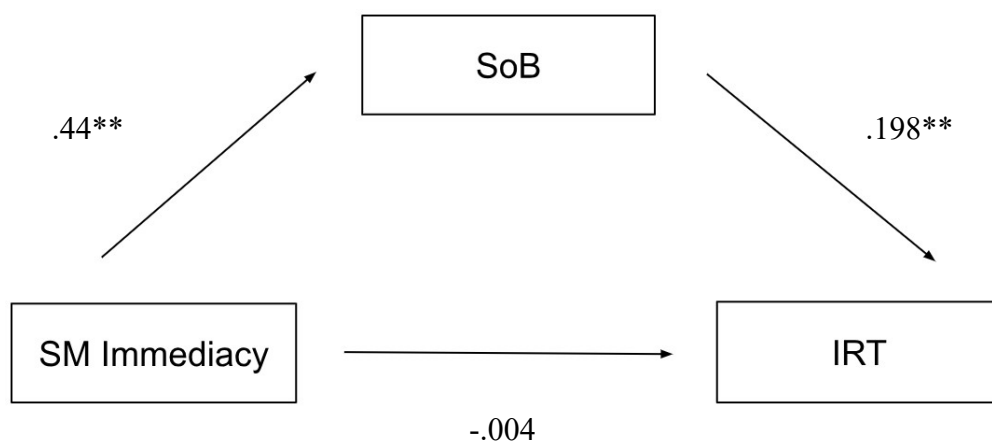
a) *SM_immediacy = Student mentor immediacy and SoB = student sense of belongingness and IRT = student intellectual risk-taking*

b) ** = p<.05; ** = p<.001*

Discussion

This study examined the relationship between mentor immediacy and two student outcomes: their SoB and their IRT. More exactly, the study aimed to test four hypotheses regarding the impact of FM- and SM immediacy on these outcomes in a sample of 180 first-year Psychology students at the University of Groningen.

The results supported H1 by demonstrating that overall mentor immediacy significantly predicted students' SoB, thus highlighting the importance of mentor immediacy in enhancing students' SoB within the classroom.

Contrary to our initial expectations, H2 was not supported. The results revealed that mentor immediacy did not significantly predict students' IRT. Thus, this finding suggests that while mentor immediacy is beneficial for students` SoB, its impact on their IRT may be low, indirect, and/or context-dependent.

Looking more specifically at the two types of mentors, the results concerning Hypotheses 3 and 4 show that SM immediacy had a significantly stronger positive effect on both student SoB and student IRT compared to FM immediacy. This highlights the influential role of SMs in promoting students` SoB as well as students` IRT.

The exploratory mediation analysis, additionally, indicated a full mediation effect of student SoB on the relationship between SM immediacy and student IRT. In the case of FM immediacy, no mediating effect was observed. This specific finding emphasizes the importance of SoB when it comes to promoting students` IRT and at the same time underscores that this positive influence seems to be limited to student mentoring.

Mentor Immediacy's Impact on Students' SoB and IRT

The study`s findings regarding the significant positive relation between mentor immediacy and students' SoB align with existing literature (Freeman et al., 2007; Granziera et

al., 2022). The mentors` immediacy behavior seems to be crucial in creating a supportive and engaging learning environment, laying the ground for students` SoB to develop and strengthen. By using open communication and emotional support, it seems that the mentor can help the students feel valued and included in the academic community and the classroom.

Contrary to our hypothesis, mentor immediacy did not significantly predict students' IRT. This finding contrasts with Beghetto (2008), who found that supportive teaching styles positively influence IRT. It has to be mentioned though that supportive teaching was not the strongest predictor in Beghetto`s study. Interest in science and creative self-efficacy had stronger positive relationships, suggesting that a supportive teaching style alone may not significantly enhance IRT (Beghetto, 2008). All in all, the discrepancy suggests that the factors influencing IRT are more complex than previously thought. Therefore, it is important to consider the broader context of the modern higher education system when talking about students` IRT. The education system`s performance-oriented systems and teaching methods might impact the students´ IRT, depending on the student`s grade level and the type of mentor they are interacting with.

The important role of SMs in promoting students` SoB and IRT

Looking more specifically at the type of mentor, our findings regarding H3 emphasize the importance of SM immediacy in promoting students` SoB. These results align with previous research on the benefits of student mentoring in creating a safe environment (Reeves et al., 2019) and in fostering social connectedness and reducing loneliness among students (Paolucci et al., 2021; Raymond and Sheppard, 2017).

SMs might be more effective in promoting students' SoB due to their relatability and shared experiences with mentees. Research suggests that SMs and students often have a more informal way of conversing, and students thus can discuss more candidly some information with SMs than with FMs (Webb et al., 2009, p. 1100). This proximity might help to create a

more empathetic, supportive, and safe environment, which in turn might foster a SoB in the classroom. Additionally, being relatively inexperienced in leading a class, the SM might have a greater need for building strong relationships and rapport with the students to gain emotional validation and support. The FMs, who are already established in their role, may not need the same level of reassurance and can use their experience and maturity to emphasize the academic aspects.

Given our initial hypothesis that FMs' immediacy would have a stronger impact on students' IRT compared to FMs' immediacy (H4) and the insignificant effect of overall immediacy on student IRT (H2), it was surprising to discover that SMs were the significant factor in enhancing students' IRT, while FMs' immediacy had no significant effect. This contrasts with previously mentioned findings regarding the important role of FMs in developing students' academic self-concept and enhancing their motivation and achievement (Komarraju et al., 2010).

Instead, the SM might create the psychological safety necessary for students' IRT to develop. According to Reeves et al. (2018), student mentoring helps establish a secure environment that in turn encourages student engagement and their IRT. Additionally, seeing the SM as a competent and relatable figure might inspire the belief, "If they can do it, so can I," thereby boosting students' confidence and willingness to take intellectual risks (Webb et al., 2009). Thus, by consistent displays of warmth and immediacy, it might be easier for the SM to dismantle the intimidating facade sometimes associated with academia, than it is for the FM. FMs, on the other hand, often perceived as authority figures, might unintentionally reinforce the students` focus on internalization, on the process of adhering to scientific norms and meeting external demands such as deadlines and evaluations (Goodenow, 1993). This might not only undermine the students` intrinsic motivation but also promote competition and

a fear of failure, thereby making them less likely to engage deeply with the material and take intellectual risks (Ryan & Deci, 2000).

Given those circumstances, the immediacy behavior of the FM might not be enough to encourage first-year students, who might have not yet developed the intellectual courage and motivation, to be autonomous, self-determined, and willing to take intellectual risks. At this stage of their academic journey, first-year students might have a greater need for factors related to belonging rather than factors of academic exploration, including IRT.

The Mediating Role of SoB

The insignificant effect of mentor immediacy on students` IRT (H2), highlights the need to explore alternative factors, such as classroom environment, student personality traits, and specific educational contexts, involved in students` IRT. The additional exploratory mediation analysis identified SoB in the classroom as an important mediator for the relationship between SM immediacy and IRT. Research consistently shows student SoB`s crucial role in their academic engagement and performance (Freeman et al., 2007). According to Maslow`s hierarchy of needs, a safe and trusting environment fulfills safety needs, which have to be met, in order for an individual to begin to approach self-actualization needs, including motivation and achievement (Maslow, 1943). The SM, by being relatable and having had similar experiences, might be perceived as more of a friend than an employee member of the faculty and more naturally meet the students` safety needs than the FM. Such high-quality student-teacher relationships were found to be significantly associated with students' sense of autonomy, personal control, and active engagement in school (Ryan et al., 1991). Thus, the SM`s immediate and warm behavior might create a safe space and a SoB in the classroom that allows the students to feel accepted and valued even when taking academic risks.

The relation of SoB and IRT is nicely displayed in the interplay of the concepts of internalization and externalization introduced by (Light et al., 1967). It is suggested that in order to facilitate a well-managed SoB, on the one hand, the students need to feel they 'fit into' the scholarly world, adhering to the principles and norms of academia and scientific investigation (internalization). Secondly, they must feel accepted and valued even when taking academic risks, such as voicing unconventional ideas or questioning established norms and following their intuition (externalization) (Hölscher et al., 2020). Thus, as shown by the mediation analysis, by displaying immediacy and by offering patient guidance, constructive feedback, and modeling scholarly principles, on the one hand, and by demonstrating unconditional support and genuine interest in exploring unconventional ideas, especially the SM seems to be able to create a holistic SoB, which in turn makes students feel safe taking intellectual risks.

Limitations & Future Research

While having generated valuable insights, the study has several limitations that should be regarded in future research. First, the whole sample consists of students enrolled in the Academic Skills course at the University of Groningen, a group that is largely female, primarily European, and mainly consists of young, well-educated individuals. Future studies should therefore include more diverse samples to enhance generalizability. Additionally, it would be interesting to investigate the role of the FM and their impact on students IRT in upper-level students. First-year students, still new to academia, might be more susceptive to the fear of failure and have a greater need for factors related to belonging. Upper-level students, who are more grounded in the academic realm, might see more value in the FM and might have a greater need for factors related to self-actualization, such as IRT.

Secondly, the study`s results are based on self-reported measures, which tend to be subject to response biases such as social desirability- and recall biases. By incorporating more

objective measures and adding qualitative research on mentor behavior and student outcomes it may be possible to provide more robust and reliable findings.

Lastly, the study relied on a cross-sectional research design, which precludes the observation of causal relationships. As a result, we could only infer correlations between the variables. Experimental designs could instead examine the causal relationship between mentor characteristics and student outcomes. This would help to identify effective strategies for promoting supportive and engaging educational environments. Besides that, longitudinal studies could provide valuable insights into how the students` needs for different types of mentors and their IRT develop throughout their Bachelor.

Practical Implications

The findings of this study have valuable practical implications for educational institutions and mentoring programs. Especially the critical role of SMs in fostering soft skills, such as SoB and IRT, should be taken into account. Peer mentoring programs (PMP) could be a great way to create psychological safety and make students feel part of the academic community. This could be especially valuable among first-year students.

The PMPs complement the role of the FM, who, with their extensive expertise and professionalism, might be more effective in conveying hard skills and acting as role models for professional behavior. Nevertheless, FMs should receive the same training in bonding and community-building skills as SMs get, enabling them to foster psychological safety for students while maintaining their primary focus on academic guidance. Taking all the findings into account, a teaching program that incorporates a mentor triad system, involving interaction between students, SMs, and FMs would maximize the benefits of both mentor types and thus build a beneficial educational context for the students.

Conclusions

On the whole, this study highlights the significant impact of SM immediacy on the students' soft skills SoB, and IRT, with SMs playing a more influential role than FMs. The findings emphasize the importance of PMPs in fostering supportive and empathetic learning environments. Especially with first-year students, this psychological safety and SoB was found to build an important condition for the students to engage in IRT. Future research should explore these dynamics with students of different year levels and additional influencing factors to further enhance our understanding.

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