# Examining the Influence of Immediacy, Trust, and Credibility on Out-of-Class Communication in Peer and Faculty Mentorship

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### Abstract

Effective mentorship has been shown to play a vital role in students' academic achievement and overall satisfaction. This study aimed to explore the factors contributing to successful peer and faculty mentorships in higher education and their impact on student engagement. Psychology students at the University of Groningen (N = 288) completed an online questionnaire measuring immediacy, trust, credibility, and out-of-class communication (OCC). A bootstrap analysis using PROCESS (Hayes, 2013) supported the hypothesized moderated mediation model, revealing that mentor immediacy positively influenced OCC, with trust acting as a mediator and mentor credibility moderating the relationship between immediacy and trust. Significant differences between peer and faculty mentors were found. Specifically, students reported more immediacy, trust, and OCC with peer mentors compared to faculty mentors. However, no significant differences in perceived credibility were found between the two mentor types. Our study provides practical implications for educational institutions and offers directions for teacher training interventions, as well as future research. Overall, the findings of the present study underscore the importance of mentor immediacy, trust, and credibility in enhancing student engagement in OCC and emphasize the unique strengths of peer mentorship programs.

*Keywords:* mentoring, peer mentorship, immediacy, credibility, out-of-class communication

# Examining the Influence of Immediacy, Trust, and Credibility on Out-of-Class Communication in Peer and Faculty Mentorship

The guidance, advice, and influence of mentors on an individual's life trajectory and personal development is often profound. Additionally, effective mentorship has been recognized as a crucial factor in enhancing students' academic achievement and overall satisfaction with their educational experience (Lim & Kim, 2023; Pilot et al., 2021; Gallup-Purdue Index, 2014). However, what specific qualities of mentoring relationships contribute to their success?

Early research indicates that these qualities may differ depending on the intended purpose of mentoring, which has been categorized into two overarching domains: careerrelated and psychological (Kram, 1983; Schockett & Haring-Hidore, 1985). Career-related functions include providing challenging work, protection, sponsorship, promoting exposure and visibility, and offering coaching for professional development. On the other hand, psychosocial functions focus on role modeling, encouragement, counseling, and fostering friendship, which can impact self-efficacy and self-worth and help alleviate stress and anxiety (Eller et al., 2014).

In this paper, we will specifically focus on mentoring in higher education, although it should be noted that mentoring can be applied in various other settings such as schools, medical or business contexts (Ehrich et al., 2004). By focusing on university mentoring, we intend to explore the advantages and challenges that arise within the context of supporting students' academic and personal growth through mentorship.

Traditionally, educational mentorship takes place in the classroom, where mentors provide guidance and support during scheduled class sessions. However, meaningful interactions between mentors and students extend beyond these formal settings (Khan et al., 2015). Informal communication between instructors and students outside of class is beneficial for both parties (Clark et al., 2002), as it improves student retention rates and strengthens relationships between students and faculty (Jaasma & Koper, 1999; Nadler & Nadler, 2000; Pogue & AhYun, 2006).

While the importance of fostering out-of-class communication (OCC) is wellestablished, there is limited research that examines the elements that contribute to it. The present study aims to fill this gap by investigating factors that influence students' engagement in OCC with their mentors.

### **Mentoring Relationships**

Building upon the significance of forming supportive relationships to alleviate college stress (Tinto, 1993), mentoring relationships have been acknowledged as effective in providing encouragement and support to students (Cornelius et al., 2016; Seery et al., 2021). Research by Kram (1983) has laid the foundation for a comprehensive theoretical framework on mentoring (Crisp & Cruz, 2009). Initially, her early studies concentrated on conventional mentoring relationships (Kram, 1983). However, further research acknowledged the effectiveness of peer mentorship in cultivating student development and enhancing well-being (Kram & Isabella, 1985). Peer mentoring varies across institutions but generally involves student mentors sharing academic knowledge and providing guidance and assistance to their fellow students. In contrast, more traditional mentoring in higher education typically involves experienced faculty mentors offering emotional support, academic guidance, and teaching course content. However, the relationship between a mentor and mentee is also shaped by the degree to which the mentor embraces their role as a guide and mentor rather than only focusing on teaching.

Despite their differences, faculty and peer mentoring share similarities in psychosocial functions, while the extent of career-related functions within mentoring relationships can vary depending on the mentor's position within the organization (Crisp & Cruz, 2009). Consequently, faculty mentors often have a broader spectrum of career-related functions, whereas peer mentors are usually limited to information exchange and career planning (Terrion & Leonard, 2007). The psychological function of mentoring, however, appears to be valued more highly by younger student mentees compared to career-related functions (Allen et al., 1997; Rose, 2005). According to Xie and Derakhshan (2021), immediacy, trust, and credibility are all important factors that assist teachers in effectively communicating with students and meeting their emotional and interpersonal support needs. As a result, the level of closeness within mentorships plays a central role in determining the extent to which they can fulfill psychosocial goals such as emotional and psychological support.

### Immediacy

The concept of emotional connection aligns with the concept of immediacy in interpersonal communication, which encompasses behaviors that convey warmth and involvement and can enhance psychological proximity. Initially introduced by Mehrabian (1971, 1981), immediacy primarily focused on nonverbal communication behaviors. However, subsequent research expanded the definition to include elements of speech, recognizing the contribution of both verbal and nonverbal cues to the perception of immediacy (Faranda, 2015). Nonverbal immediacy includes cues such as eye contact, tone of voice, smiling, and the use of gestures that suggest a positive attitude and openness. Verbal immediacy, on the other hand, includes behaviors such as active listening, providing individual feedback, and employing personal pronouns, humor, or anecdotes. By integrating both nonverbal and verbal cues, immediacy encompasses a comprehensive range of behaviors that foster approach, liking, and interpersonal closeness.

The concept of immediacy was extended to the classroom setting by Andersen (1979). In an instructional setting, immediacy refers to the degree of psychological closeness

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that a teacher establishes with their students. Gorham (1988) introduced a verbal component in the operationalization of teacher immediacy and discovered that the inclusion of personal examples, self-disclosure, humor, and praise notably increased the perception of closeness between instructors and students. Expanding on this notion, a substantial body of research supports the positive effects of perceived immediacy on student learning outcomes, engagement, and motivation (Christophel, 1990; Titsworth, 2001; Zheng, 2021). Additionally, immediacy increases students' willingness to communicate with professors outside of class (Faranda, 2015; Fusani, 1994; Jaasma & Koper, 1999) and contributes to building positive relationships between instructors and students (Frymier & Houser, 2000; Miller et al., 2013; Xie & Derakshan, 2021).

### Trust

Perceived warmth and benevolence are particularly influential in developing trusting relationships that encourage individuals to seek assistance (Fiske et al., 2007; Weiss et al., 2022). Granitz et al. (2009) highlight that the presence of trust in mentoring relationships yields benefits for both mentors and mentees. In the context of mentor-mentee relationships, establishing trust is vital for creating a safe and supportive learning environment. Mentors can build trust by actively listening and displaying approachability through immediacy behaviors such as sustained eye contact, nodding, and gesturing (Chamberlin, 2000), but also through verbal immediacy behaviors (Khan et al., 2015).

Trustworthiness can be determined by the level of comfort the mentee feels in sharing personal information with their mentor (Kerssen-Griep & Witt, 2015; Terrion & Leonard, 2007). Seery et al. (2021) emphasize the importance of trust-building in mentoring relationships and assert that by establishing a foundation of trust, mentees are more likely to openly discuss any concerns they have.

### **Teacher Credibility**

Trust can be built in several ways, and a key factor is credibility, which refers to the believability of a source (McCroskey, 1998). The significance of credibility as a persuasive tool was emphasized by the philosopher Aristotle (Pishghadam & Karami, 2017), and the concept has been adapted for the classroom context, with a considerable body of research recognizing its relevance for teaching success in educational settings (McCroskey & Teven, 1999; Nayernia et al., 2020).

Teacher credibility encompasses students' perceptions of an educator's competence, character, and level of care (Teven & McCroskey, 1997). Competence refers to a teacher's adequate knowledge and expertise in a subject matter, character to moral qualities like honesty and fairness, and caring encompasses the expression of genuine concern for students' well-being (Frymier & Thompson, 1992; McCroskey, 1998; Teven & Hanson, 2004). As a result, mentors can build credibility and gain trust from students by showing expertise, honesty, consistency, and integrity.

The credibility of a teacher depends on students' evaluations of both verbal and nonverbal behaviors exhibited by instructors (Witt & Kerssen-Griep, 2011) and is positively correlated with teacher immediacy (Chamberlin, 2000; Teven & Hanson, 2004). Moreover, credibility is thought to magnify the benefits that immediacy behaviors have on learning, with some research suggesting that it can mediate the relationship between non-verbal immediacy and learning outcomes (Schrodt et al., 2009). A meta-analysis by Finn et al. (2009) highlights the crucial role of teacher credibility in successful teacher-student interactions: when teachers were perceived as less credible, students reported lower motivation, less respect, and decreased cognitive learning. Conversely, students' ratings of professors are higher when they perceive them as credible, and this perception is linked to their willingness to interact with the instructor outside of the classroom (Myers, 2004; Nadler & Nadler, 2001; Teven & McCroskey, 1997).

### **Out-of-Class Communication**

Out-of-Class Communication (OCC) includes student-initiated behavior like engaging in self-disclosure and small talk, asking questions about course-related information, the student's willingness to seek professional or personal guidance or wanting to know more about the teacher personally (Faranda, 2015; Myers, 2004).

Aylor and Oppliger (2003) found that a teacher's kind, compassionate, and helping behavior displayed inside the classroom encourages students to engage in OCC and that this is linked to higher student satisfaction with the teacher. Furthermore, Kim and Lundberg (2015) found that regular student-faculty engagement, within and outside of the classroom, cultivates a feeling of belonging and trust among students. Additionally, engaging in OCC has been found to improve student perceptions of instructor immediacy and trust (Jaasma & Koper, 1999). Our study seeks to advance the current research by investigating the effects of immediacy and trust on OCC for peer and faculty mentors while exploring the potential moderating role of credibility.

Previous research indicates that students are more motivated to participate in OCC when they view their mentors as credible and competent in helping them overcome career or course-related challenges (Bippus et al., 2003; Nadler & Nadler, 2001). However, the precise nature of the relationship remains somewhat ambiguous. Research suggests that the perceived competence of a mentor can significantly impact the development of trust (Fiske et al., 2007; Weiss et al., 2022). Furthermore, it has been proposed that perceived skill may act as a predictor of perceived reliability, which in turn influences trust (Mayer & Schoorman, 1995). Additionally, Myers (2004) found that perceived teacher competence, character, and caring are all connected to student engagement in OCC, but it remains uncertain how immediacy influences this relationship and if differences between peer and faculty mentors exist.

### **Theoretical Framework**

The discussed findings suggest links between mentors' immediacy and trust (Chamberlin, 2000; Kerssen-Griep & Witt, 2015) and the positive effects of mentors' immediacy and trust on OCC (Faranda, 2015; Fusani, 1994; Jaasma & Koper, 1999; Khan et al., 2015). Moreover, research has established an association between immediacy and perceived credibility (Schrodt et al., 2009; Teven & Hanson, 2004) and instructor credibility and increased OCC (Bippus et al., 2003; Nadler & Nadler, 2001). However, it is unclear how the impact of a mentor's immediacy and trust on OCC is influenced by perceived teacher credibility and if there are differences between peer and faculty mentors in these relationships.

In the proposed moderation mediation model (see Figure 1), we hypothesize that mentor immediacy leads to out-of-class communication and that this is mediated by trust. Secondly, we hypothesize that differences in perceived mentor credibility moderate the relationship between immediacy and trust. Thirdly, we expect to find significant differences in the moderated mediation effect between faculty and peer mentors.

#### Figure 1





### **Participants**

After removing invalid or missing cases, the sample included 288 first-year students from the Bachelor of Psychology program at the University of Groningen who are currently enrolled in the course *Academic Skills*. Among the participants, 212 identified as female, 72 as male, and four as other. The age of the participants ranged from 16 to 31, with a mean age of 20.06 years. Most participants (57.4 %) were Dutch, followed by 19.8 % who were German. Other nationalities, including Romanian, Slovak, American, Irish, and others, accounted for 22.8 % of the participants. All participants were proficient in English, at least at a B2 level, as the questionnaire was administered in English. Convenience sampling was employed using Sona system (Sona Systems, n.d.), offering study credits to the participants.

### **Study Design and Procedure**

This study utilized a cross-sectional design to investigate the proposed moderated mediation model. Data were collected through an online survey hosted by Qualtrics (Qualtrics, Provo, UT). As the mentor's immediacy behavior was not directly manipulated or altered by the study design, the study was correlational in nature. This study was part of a larger bachelor thesis project and was approved by the Faculty Ethics Committee.

The survey took approximately 15-20 minutes to complete. Initially, participants had to confirm their status as first-year psychology students enrolled in the *Academic Skills* course. Only those who met this condition were allowed to proceed since students who attended this course were guaranteed to have contact with both peer and faculty mentors. A study introduction outlining the objectives and procedures was provided, followed by an informed consent form. After actively agreeing to participate, all respondents completed the same questionnaire in a predetermined order. Participants had sufficient time to complete the questionnaire and had the option to withdraw at any point. If participants chose to discontinue, their data were excluded from the study. Upon survey completion, participants received 0.9 Sona credits.

### Instruments

This study was part of a larger project in the context of a bachelor thesis. The online survey employed a total of eight scales, of which four scales are included in this study (see Appendix). The remaining scales are discussed in separate bachelor thesis projects. The participants were required to complete the questionnaire separately for their peer mentor and faculty mentor.

### **Immediacy**

Immediacy behaviors were assessed using Kwitonda's (2017) verbal and non-verbal immediacy scales, which were combined into a unified scale (see Figure 2). The students were asked to rate the frequency of the mentor's immediacy behaviors in the target class using a 5-point Likert-type scale, ranging from Never (1) to Always (5). The adapted scale included 23 items (e.g., "The instructor smiles at individual students in the class."). The internal consistency of the scale, determined by Cronbach's alpha, was found to be  $\alpha = .85$  for faculty mentors and  $\alpha = .84$  for peer mentors. For the moderated mediation analysis, a combined score was introduced, which includes the immediacy scores from both peer and faculty members.

### Student Trust in Faculty

The Student Trust in Faculty Scale (STF; Forsyth et al., 2004) was utilized to measure the level of trust students placed in their academic mentors (see Figure 3). The scale consists of 13 items (e.g., "My faculty/peer mentor is always ready to help me."). Participants expressed their agreement on a 4-point Likert-type scale, ranging from strongly disagree (1) to strongly agree (4). Internal consistency for the scale was found to be  $\alpha = .92$ for both peer and faculty mentors. To conduct the moderated mediation analysis, a merged score that incorporates the trust ratings from both peer and faculty members was utilized.

### **Out-of-Class** Communication

The Out-of-Class Communication Scale (Faranda, 2015) was used to measure student-initiated out-of-class communication (OCC) with mentors (see Figure 4). This scale evaluates the frequency and quality of communication between mentors and mentees outside of formal mentoring sessions and includes 13 items. Participants indicated their willingness to engage in specific OCC activities on a Likert-type scale on items such as "I would have no problem seeking career advice from my faculty/peer mentor." The scale demonstrated good internal consistency, with Cronbach's alpha computed as  $\alpha = .90$  for both faculty and peer mentors. To perform the moderated mediation analysis, we utilized a merged score that integrates the OCC ratings for both peer and faculty members.

### **Teacher Credibility**

The Teacher Credibility scale by McCroskey and Teven (1999) was used to assess participants' perceptions of the teacher's credibility (see Figure 5). The scale consists of 18 items in which the students indicated their feelings toward various aspects of their mentor (e.g., "Untrained or Trained," "Moral or Immoral"). A 7-point semantic differential scale was used, with ratings of 1 and 7 indicating strong feelings (e.g., "1 - Honest" and "7 -Dishonest"). The internal consistency of the scale, as assessed by Cronbach's alpha, was found to be  $\alpha = .95$  for both faculty and peer mentors. For the moderated mediation analysis, a merged score was employed, which considers the credibility scores from both peer and faculty members.

### **Data Analysis**

Data analysis was conducted using IBM SPSS software (Version 27). The mediation effects were modeled using the PROCESS macro by Hayes (2013). Specifically, Model 7 was utilized to examine the moderated mediation effect. This model, which is based on regression analysis, employed bootstrapping to address potential violations of the normality assumption. The moderation mediation analysis included a bootstrap analysis with 5,000 resamples. A 95% confidence interval was used to determine the significance of the results. A parameter was considered statistically significant if the bootstrapped confidence interval did not include zero. A paired sample t-test compared the mean student evaluations for peer and faculty mentors. The variables in the model were immediacy (independent variable), credibility (moderating variable), trust (mediating variable), and OCC (outcome variable).

### **Data Preparation**

Initially, a total of 336 students volunteered to participate in the study. However, some participants were excluded from the sample, and their data were not included in the analysis. Specifically, 47 participants did not meet the criteria of being first-year students enrolled in the Academic Skills course or failed to complete the questionnaire. Additionally, one outlier was identified, and their data was removed due to acquiescence bias. Consequently, the final sample consisted of 288 individuals.

### **Ethical Considerations**

Participants were informed that participation in the study was entirely voluntary and that declining to participate would not have any adverse consequences. Participants had the freedom to withdraw from the study at any time. As all responses were treated confidentially and anonymously, the results and personal opinions of students regarding their mentors cannot be linked to specific individuals. Gender-neutral pronouns were used in the questionnaire to avoid any discriminatory language. Finally, participants were provided with contact information for the thesis supervisor if they had any concerns regarding the study.

### Results

This analysis investigated how credibility moderates the mediating effect of trust on the relationship between mentor immediacy and OCC for both peer and faculty mentors. All assumptions of the moderated mediation model were met.

### **Descriptive Statistics**

Firstly, Pearson's correlations, means, and standard deviations were calculated for all variables (Table 1). The results revealed significant positive correlations between all variables included in the study.

### Table 1

Pearson Corre	lations, Means,	and Stand	'ard	Deviations
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	1	2	3	4	М	SD	
1. OCC	-				103.26	22.02	
2. Credibility	.26**	-			202.49	28.88	
3. Immediacy	.48**	.56**	-		161.37	19.15	
4. Trust	.35**	.58**	.56**	-	79.55	10.78	

*Note*. The unstandardized Pearson correlation coefficients are reported for each variable. \*\* indicates p < .01.

### **Moderated Mediation Analysis**

The PROCESS macro model 7, developed by Hayes (2013), was utilized to investigate the moderated mediation effect. The comprehensive overall model yielded significant results (F(3, 284) = 76.33; p < .01). The overall model's R<sup>2</sup> value was 0.4365, indicating that the predictors accounted for 43.65% of the variance in OCC.

As Table 2 indicates, immediacy was found to have a significant positive impact on trust, suggesting that mentors who displayed greater immediacy in their interactions with mentees were associated with higher levels of trust. Trust, in turn, had a marginally significant positive impact on OCC. Additionally, the moderated mediation analysis revealed a significant indirect effect of immediacy on OCC through trust (Table 3). This finding suggests that trust partially mediated the relationship between immediacy and OCC, supporting hypothesis 1.

H1: Immediacy leads to out-of-class communication, which is mediated by trust.

Moreover, credibility had a significant positive impact on trust, and the interaction between immediacy and credibility had a significant negative impact on trust (Table 2). This finding suggests that the relationship between immediacy and trust is moderated by mentor credibility, such that the effect of immediacy on trust is weaker for mentors perceived as more credible.

Table 2

Full Model: Moderated mediation analysis						
	В	SE	t	р	LLCI	
Immediacy to Trust	0.18	0.04	4.74	<.001	0.11	
Trust to OCC	0.26	0.13	1.96	.051	0	
Immediacy to OCC	0.47	0.08	5.65	<.001	0.30	
Moderation Credibility	0.15	0.04	4.19	.001	0.08	
Int (Immediacy x Credibility)	-0.003	0.001	-3.10	<.002	004	

*Note.* LLCI = lower limit confidence interval; ULCI = upper limit confidence interval.

At low, moderate, and high levels of credibility, the conditional indirect effect of immediacy, mediated by trust, was found to be significant (Table 3). Therefore, there is support for the proposed moderated mediation model in which trust mediates the relationship between immediacy and OCC across varying levels of credibility.

#### Table 3

Moderator Credibility	Effect	SE	t	LLCI	ULCI
-28.88	0.07	0.04	1.75	0.11	0.23
0.00	0.05	0.03	1.67	0.27	0.74
28.88	0.03	0.02	1.50	0.32	0.59

Full Model: Conditional indirect effect of X on Y at values of the moderator

*Note.* Values for the moderator are the mean plus/minus one SD from mean; LLCI = lower limit confidence interval; ULCI = upper limit confidence interval.

ULCI

0.26

0.52

0.63

0.22

-0.01

Figure 6 portrays the moderated mediation model with the values for the effects on each pathway, which were all significant. However, the moderation effect of credibility displays variability. The graph demonstrates a steeper gradient for low and average credibility, suggesting that at low credibility, the effect of immediacy on trust is stronger. As credibility increases, the slope tends to flatten, suggesting that higher levels of credibility reduce the influence of immediacy on trust. In other words, while an increase in immediacy positively affects trust at lower levels of credibility, there is less change in trust at higher levels of credibility.

### Figure 6





Note. The beta coefficients for each relationship are reported.

Furthermore, as the findings indicated a significant index of moderated mediation (B = -0.0007; SE = 0.0004; 95% CI = [-0.0016; -0.0001]), it can be concluded that differences in perceived mentor credibility were shown to moderate the indirect effect of immediacy on OCC through trust since the 95% CI does not include zero. Figure 7 portrays the moderated mediation model with the values for the effects on each pathway, all of which were statistically significant.

H2: Credibility moderates the impact of immediacy, moderated by trust, on OCC.

Figure 7 Moderated Mediation Model with Effects for each Relationship



*Note*. The beta coefficients for each relationship are reported. \*\* indicates p < .05.

### Peer Mentor vs. Faculty Mentor

The moderated mediation analysis was conducted separately for peer mentors (Table 4) and faculty mentors (Table 5). Notably, the results demonstrated similar patterns and overall significance for both peer mentors (F(3, 284) = 65.09, p < .001) and faculty mentors (F(3, 284) = 120.40, p < .001), supporting the priorly discussed hypotheses. The model summary indicated that predictors accounted for 41% of the variance in trust for peer mentors and 56% of the variance in trust for faculty mentors.

### Table 4

Moderated mediation analysis for Peer Mentors

5						
	В	SE	t	р	LLCI	ULCI
Immediacy to Trust	0.17	0.03	5.41	<.001	0.11	0.23
Trust to OCC	0.51	0.12	4.21	<.001	0.27	0.74
Immediacy to OCC	0.46	0.07	6.51	<.001	0.32	0.59
Moderation Credibility	0.15	0.02	6.91	<.001	0.11	0.19
Int_2 Immediacy and Credibility	-0.01	0.00	-3.76	<.001	-0.01	0.00

*Note*. LLCI = lower limit confidence interval; ULCI = upper limit confidence interval.

The coefficients indicated that for peer mentors, immediacy ( $\beta = 0.17$ , p < 0.001) and credibility ( $\beta = 0.15$ , p < 0.001) had positive and significant effects on trust (Table 4). The interaction term was also significant ( $\beta = -0.01$ , p < 0.001), indicating a moderation effect.

Similarly, for faculty mentors, immediacy ( $\beta = 0.20, p < 0.001$ ) and credibility ( $\beta = 0.17, p < 0.001$ ) had positive and significant effects on Trust (Table 5). Additionally, the conditional effect of immediacy on trust for faculty mentors was significant across all levels of credibility, with varying effect sizes. The interaction was significant ( $\beta = 0.00, p < 0.01$ ) for faculty mentors as well. The results showed a moderation effect and suggested that the relationship between immediacy and trust varied depending on the level of credibility of faculty mentors.

### Table 5

Moderated mediation analysis for Faculty Mentors

	В	SE	t	р	LLCI	ULCI
Immediacy to Trust	0.20	0.03	7.09	<.001	0.14	0.25
Trust to OCC	0.59	0.12	4.83	<.001	0.35	0.83
Immediacy to OCC	0.47	0.08	5.65	<.001	0.30	0.63
Moderation Credibility	0.17	0.02	8.83	<.001	0.13	0.21
Int_3 Immediacy and Credibility	0.00	0.00	-3.66	<.001	-0.01	0.00

*Note.* LLCI = lower limit confidence interval; ULCI = upper limit confidence interval.

Additionally, an analysis was conducted to compare differences between peer and faculty mentors using a paired sample t-test. The results revealed no significant differences in perceived credibility between the two groups (t (287) = -.931, p = .352). However, when examining the variables of immediacy, trust, and OCC, significant differences emerged between faculty mentors and peer mentors. The outcomes suggest that faculty mentors are perceived to demonstrate lower levels of immediacy (t (287) = -3.289, p = 0.001), trust (t (287) = -2.372, p = 0.018), and lower OCC (t (287) = -5.038, p = <.001) compared to peer

mentors. These findings suggest that differences in the perception of peer and faculty mentors exist. Specifically, students tend to perceive peer mentors as displaying greater immediacy, trust, and OCC compared to faculty mentors.

H3: There are significant differences between peer and faculty mentors.

### Discussion

The present study investigated the impact of mentor immediacy, trust, and credibility on participation in OCC for peer and faculty mentorships. Through a comprehensive analysis of the data, the hypotheses were corroborated, providing evidence for the proposed relationships.

The first hypothesis proposed a positive association between mentor immediacy and OCC, with trust acting as a mediating factor. The results of this study support this hypothesis, indicating that higher levels of mentor immediacy are indeed linked to increased OCC. Overall, these findings give valuable insights into the role of immediacy in promoting OCC for both peer and faculty mentors.

Moreover, the results suggest that trust serves as a significant mediator in the relationship between mentor immediacy and OCC. These results provide additional support to previous studies, which have established that teacher immediacy and trust are both positively related to student participation in OCC (Dobransky & Frymier, 2004; Myers, 2004). The current study expands the literature by demonstrating the mediating role of trust in the relationship between immediacy and OCC for both peer and faculty mentors.

In addition, the second hypothesis proposed that the influence of mentor immediacy on OCC, mediated by trust, would be moderated by credibility. The results confirm this hypothesis, revealing a significant interaction effect of credibility and immediacy. It was observed that while an increase in immediacy positively affects trust at lower levels of credibility, there is less change in trust at higher levels of credibility. Several explanations seem to be plausible for this effect. When a mentor has a high level of credibility, the effects of immediacy on trust may be overshadowed by their expertise and reputation. Previous research by Pogue and AhYun (2006) found that students experienced more affective learning with low-immediate, high-credibility teachers compared with high-immediate, low-credibility teachers. Individuals may be more inclined to trust and rely on the mentor's expertise instead of their immediate responsiveness. As a result, the influence of immediacy on trust would become relatively weaker compared to the influence of credibility.

Furthermore, the high credibility of the mentor might have already established a foundation of trust between the mentor and the mentee. In such cases, the effect of immediacy on trust might be less substantial since trust is already established based on the mentor's credibility. Consequently, the moderating effect of credibility changes the relationship between immediacy and trust. The current study contributes to the existing literature by specifically examining the moderating impact of mentors' credibility on the relationship between immediacy and trust on OCC.

The third hypothesis explored differences between peer and faculty mentors. Peer mentors demonstrated higher levels of perceived immediacy, trust, and OCC compared to faculty mentors, but there were no significant differences in credibility. Several explanations can account for these findings, which highlight the potential advantages of peer mentorship.

To begin with, the mentor-mentee relationship may vary for faculty mentors and peer mentors. Peer mentors are often closer in age and experience to the mentees, which may facilitate a greater sense of familiarity. This closeness in age and experience may mean that peer mentors are seen as more relatable and accessible by the mentees (Pilot et al., 2021) and could contribute to higher levels of immediacy, trust, and OCC, but not to higher credibility. Additionally, the varying roles and responsibilities of faculty mentors and peer mentors could contribute to these differences. Faculty mentors have multiple obligations, including teaching, research, and administrative tasks, which may limit their availability for interactions outside of formal settings. On the other hand, peer mentors may have more flexibility and availability to engage in frequent and informal interactions with mentees, leading to the development of immediacy, trust, and higher levels of OCC.

Contrary to previous research indicating that older instructors are commonly perceived as more credible than younger instructors (Semlak & Pearson, 2008), our study challenges such a generalization when it comes to faculty mentors. Despite faculty mentors generally being older and having more academic experience than peer mentors, our findings indicate no significant difference in perceived credibility. The credibility of peer mentors may stem more from shared experiences rather than formal qualifications. Research by Mee-Lee and Bush (2003) suggests that mentor credibility is strongly influenced by subjectspecific knowledge, and having a shared program of study enhances the credibility of peer mentors. Therefore, students may perceive their mentors as credible if they demonstrate a strong understanding of their academic subject.

By corroborating all proposed hypotheses, this study contributes to the existing literature by demonstrating the importance of immediacy, trust, and credibility in positively shaping student engagement outside of the classroom and points to significant differences in the perception of peer and faculty mentors.

### **Limitations and Further Directions**

Despite the valuable insights gained from this study, several limitations should be considered. Firstly, this study employed a cross-sectional design, which limits the ability to establish causal relationships between variables. Although significant associations were found, caution is needed when interpreting the directionality of these relationships. Temporal precedence could not be determined since variables were not manipulated. Future research could consider using experimental designs to strengthen causal evidence and provide more robust evidence on causality and temporal sequencing. Additionally, collecting data at multiple time points throughout the academic year would provide a more comprehensive understanding of the relationship under investigation. The inclusion of a longitudinal study design would greatly improve the ability to track potential fluctuations of immediacy, trust, credibility, and OCC throughout the course.

Another limitation of the study is its correlational nature, which implies the possibility of unmeasured third variables influencing the results. Factors not included in the model, such as cultural differences or socioeconomic backgrounds, could potentially impact cultural expectations concerning teacher–student roles and ratings of credibility (Croucher et al., 2020). Zhang et al. (2006) researched the impact of instructor immediacy on OCC in Chinese and US college classrooms, suggesting that cultural factors may influence expectations regarding appropriate instructor communication behaviors, which can, in turn, affect students' engagement in OCC. To address this limitation, future studies should consider examining these variables, as doing so would contribute to a more comprehensive understanding of the relationship being investigated.

Another notable limitation is the reliance on a convenience sample. Recruitment of participants was restricted to first-year Psychology students in the Bachelor program at the University of Groningen, which limits the generalizability of the findings to a broader population. Future research should try to include participants from diverse universities, disciplines, and educational levels to enhance the external validity of the results.

Additionally, the measurement of variables relied on self-report measures, which are prone to subjectivity and response biases. Due to the study being conducted online, selfselection bias may be present, which might impact how representative the sample is. Future studies could incorporate multiple perspectives, including those of mentors and classmates, to improve the robustness of findings.

### **Practical Implications**

The findings of this study have significant practical implications for educational institutions and instructors. The results suggest that fostering mentor immediacy and trust can be an effective strategy to enhance student participation in OCC for both peer and faculty mentors. To optimize the effectiveness of mentor training programs, these should prioritize training mentors who not only excel at teaching effectively and can demonstrate credibility but also meet students' needs for career-related and psychosocial support. Tailoring teacher training interventions based on the findings of this study can further increase the success of mentorship relations. The incorporation of immediate communication and the establishment of a trusting relationship may positively impact mentors' ability to fulfill their roles in alignment with the needs of their mentees. Creating mentoring programs that prioritize immediate mentors, trust-building, and credibility can contribute to increased engagement in OCC.

### Conclusion

This study provides robust evidence supporting the positive relationship between mentors' immediacy and OCC among university students and their peer and faculty mentors. The findings also highlight the mediating role of trust and the moderating effect of credibility on this relationship. The study makes a valuable contribution to the existing literature on out-of-class communication and provides practical implications for educational institutions aiming to improve student engagement through peer and faculty mentoring programs. Future research should build upon these findings to further explore the underlying mechanisms and the advantages of peer and faculty mentorship.

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# Appendix

# Figure 2

### Verbal and Nonverbal Immediacy Scale (Kwitonda, 2017)

Please answer the following questions regarding your faculty mentor

	(1) Never	(2) Sometimes	(3) About half the time	(4) Most of the time	(5) Always
1. Asks questions or encourages students to talk	0	0	0	0	0
2. Smiles at the class while talking	0	0	0	0	0
<ol> <li>Asks how students feel about the class (assignment, due date or discussion topics)</li> </ol>	0	0	0	0	0
4. Uses monotone/dull voice when talking to the class	0	0	0	0	0
5. Praises students' work, actions or comments	0	0	0	0	0
6. Asks questions that solicit viewpoints or opinions	0	0	0	0	0
7. Refers to class as 'our' class or what 'we' are doing	0	0	0	0	0
8. Smiles at individual students in the class	0	0	0	0	0
9. Has a very relaxed body position while talking to the class	0	0	0	0	0
10. Addresses students by name	0	0	0	0	0
<ol> <li>Invites students to telephone or meet with him/her outside of class if they have questions or want to discuss something</li> </ol>	0	0	0	0	0
12. Uses a variety of vocal expressions when talking to the class	0	0	0	0	0
13. Uses humor in class	0	0	0	0	0
14. Stands behind the podium or desk while teaching	0	0	0	0	0
15. Looks at board or notes while talking	0	0	0	0	0
16. Moves around the classroom while teaching	0	0	0	0	0
17. Provides feedback on my individual work through comments on papers, oral discussions, etc	0	0	0	0	0
18. Gets into discussions based on something a student brings up even when this doesn't seem to be part of his/her lecture plan	0	0	0	0	0
19. Gestures while talking	0	0	0	0	0
20. Sits on a table or chair while talking	0	0	0	0	0
21. Gets into conversations with individual students before or after class	0	0	0	0	0
22. Refers to class as 'my' class or what 'I' am doing	0	0	0	0	0
23. Smiles at individual students in the class	0	0	0	0	0

# Figure 3

### Student Trust in Faculty Scale (Forsyth et al., 2004)

On the scales below, indicate your feelings about your faculty mentor

	(1) Strongly disagree	(2) Somewhat disagree	(2) Somewhat agree	(3) Strongly agree
. My faculty mentor is always ready to help me	0	0	0	0
2. My faculty mentor is easy to talk to	0	0	0	0
8. I feel well cared for by my faculty mentor	0	0	0	0
. My faculty mentor always does what they are upposed to do	0	0	0	0
. My faculty mentor really listens to me and my fellow tudents	0	0	0	0
. My faculty mentor is always honest with me	0	0	0	0
. My faculty mentor does a fantastic job	0	0	0	0
My faculty mentor is good at teaching	0	0	0	0
My faculty mentor has high expectations for me	0	0	0	0
0. My faculty mentor does NOT care about me	0	0	0	0
1. I learn a lot from my faculty mentor	0	0	0	0
2. I can depend on my faculty mentor	0	0	0	0

# Figure 4

## Out of Class Communication Scale (Faranda, 2015)

Please answer the following questions regarding your  $\ensuremath{\textbf{faculty mentor}}$ 

	(1) Strongly disagree	(2) Disagree	(3) Somewhat disagree	(4) Neither agree nor disagree	(5) Somewhat agree	(6) Agree	(7) Strongly agree
<ol> <li>Talking to my faculty mentor outside of class is enjoyable.</li> </ol>	0	0	0	0	0	0	0
<ol> <li>When I see my faculty mentor outside of the classroom, I do not hesitate to engage them in conversation.</li> </ol>	0	0	0	0	0	0	0
<ol> <li>I would have no problem seeking career advice from my faculty mentor.</li> </ol>	0	0	0	0	0	0	0
4. I enjoy learning more about my faculty mentor	0	0	0	0	0	0	0
<ol><li>After the course ends, I will make it a point to stay in touch with my faculty mentor.</li></ol>	0	0	0	0	0	0	0
6. I would like to get to know my faculty mentor better.	0	0	0	0	0	0	0
<ol> <li>If needed, I feel comfortable asking my faculty mentor for a letter of recommendation or to serve as a reference.</li> </ol>	0	0	0	0	0	0	0
<ol> <li>I find it helpful to talk to my faculty mentor outside of the classroom.</li> </ol>	0	0	0	0	0	0	0
9. When I have a question, I do not hesitate to contact my faculty mentor.	0	0	0	0	0	0	0
10. I seek personal advice from my faculty mentor.	0	0	0	0	0	0	0
<ol> <li>Getting to know my faculty mentor is critical to my success in their class.</li> </ol>	0	0	0	0	0	0	0
<ol> <li>Getting to know my faculty mentor will result in a better grade.</li> </ol>	0	0	0	0	0	0	0
<ol> <li>I made it a point to stop by my faculty mentor's office early in the semester.</li> </ol>	0	0	0	0	0	0	0

## Figure 5

# Teacher Credibility Scale (McCroskey & Teven, 1999)

On the scales below, indicate how you perceive your faculty mentor.

Intelligent	0000000	Unintelligent
Untrained	0000000	Trained
Cares about me	0000000	Doesn't care about me
Honest	0000000	Dishonest
Has my interests at heart	0000000	Doesn't have my interests at heart
Untrustworthy	0000000	Trustworthy
Inexpert	0000000	Expert
Self-centered	0000000	Not self-centered
Concerned with me	0000000	Not concerned with me
Honorable	0000000	Dishonorable
Informed	0000000	Uninformed
Moral	0000000	Immoral
Incompetent	0000000	Competent
Unethical	0000000	Ethical
Insensitive	0000000	Sensitive
Bright	0000000	Stupid
Phony	0000000	Genuine
Not understanding	0000000	Understanding