Effects of instructor self-disclosure on student-motivation

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Abstract

Student-engagement is an important prerequisite for academic success. Research shows that it can be influenced by external factors such as instructor behavior or instructor communication (Hardre 2006; Maric & Sakac, 2014). In the current study, we investigated the relationship between self-disclosure from the peer-mentor as well as from the faculty-mentor on student-engagement and whether identification plays a mediating role in it. Furthermore, we looked at two dimensions of self-disclosure, namely amount and relevance. We proposed, that self-disclosure from the peer- as well as the faculty-mentor will have a positive relationship with student-engagement and that identification will mediate the relationship. We conducted a mediation analysis carried out as a cross-sectional/ correlational online survey study with 107 participants. The results show, a significant relationship between the relevance of faculty-mentor self-disclosure and students' identification with their faculty-mentor as well as a direct effect between the relevance of faculty-mentor self-disclosure on student-engagement. We conclude, that indeed, self-disclosure from the faculty-mentor can have an influence on student-engagement.

Keywords: Student-engagement, self-disclosure, identification, peer-mentor, faculty-mentor

Effects of instructor self-disclosure on student-motivation

Student motivation is defined as "students' energy and drive to learn, work hard and achieve at school" (Martin, 2001). Student motivation is one of the strongest predictors for academic achievement (Steinmayr et al. 2019). Moreover, students' academic achievement as well as their student motivation play an important role in their mental health and psychological well-being (Maric, 2012). Therefore, it is important to research the factors, which promote student motivation in order to be able to optimize the variables, which can be changed, to provide an environment, which allows and promotes high student motivation.

There are individual- as well as social factors influencing the motivation of a student (Maric & Sakac, 2014). Individual factors influencing student motivation are perceived interest in the content and its usefulness for personal development (Maric & Sakac, 2014). Individual factors are hard to control, as they depend on personal choices. Social factors, on the other hand and this includes teacher behavior, can be changed and do have an impact on the motivation of a student as well.

According to Hardre (2006), the teacher is one of the factors, which influences student behavior the most. Having a positive and trustful relationship with the teacher not only has beneficial effects on academic achievements (Wubbels et al., 2006), but also has a positive influence on students' motivation to learn (Martin & Downson, 2009). As the most time of interaction between a teacher and a student is through communication, it is possible to say, that the way the teacher communicates with the students plays an integral part in the students' educational process (Punyanunt- Carter, 2006; Richmond, 1990) as well as in building a teacher-student relationship.

One aspect of teacher communication with students is teacher self-disclosure. Teacher self-disclosure is defined by Goldstein and Benassi (1994) as the act of sharing personal and professional information with the students. By disclosing personal as well as professional information the teacher reveals themselves as more accessible and open for communication

with the students (Cayanus & Martin, 2008). Teacher self-disclosure creates a close and positive relationship with the students in class (Cayanus et al., 2009; Wolker, 2011; Zhang, 2009) but also is related with an increase in the motivation of a student (McCroskey et al., 2006; Mazer et al., 2007).

Although there is some research on the relationship between teacher self-disclosure on student motivation, no research has looked at the peer- or faculty-mentor self-disclosure. Peer- or faculty-mentor programs is a widespread teaching structure in universities around the world in which a class is introduced to a peer, who has the role of social supporter or adviser, i.e., the peer-mentor, as well as to a more knowledgeable, responsible faculty mentor. Little is known how and to what extent self-disclosure from a peer-mentor differs from self-disclosure from a faculty-mentor. Furthermore, little is known about how and through which mechanism self-disclosure affects student motivation.

Therefore, in this paper, we are shedding light on to what extent identification with the peer- compared to the faculty-mentor mediates the relationship between instructor self-disclosure and student motivation.

Teacher Self-Disclosure

One of the social factors influencing student motivation is teacher or instructor behavior. As most of the time in class the behavioral interaction between teacher and students is through communication, it is important to look at what communication skills are effective in teacher-student interactions. Most research looking at communication variables affecting student motivation focus on immediacy, for example (Richmond, 1990), less research has focused on teacher self-disclosure.

Teacher self-disclosure is associated with positive learning outcomes (Cayanus & Martin, 2008), greater enjoyment of learning situations (Sorensen ,1989), increases the understanding of the subject knowledge (Wambach & Brothen, 1997), and is related to students' engagement and motivation (Cayanus & Martin, 2008,2016; Cayanus, Martin &

Goodboy, 2009). But teacher self-disclosure can have either a negative or positive impact, depending on how the teacher is self-disclosing (Goldstein & Benassi, 1994).

In this paper we are looking at two dimensions of teacher self-disclosure, which play an integral role in its effect on students: amount and relevance. The amount of teacher self-disclosure deals with how much and how often teacher self-disclose, whereas relevance explains whether the disclosure from the teacher is relevant to the discussion in class (Cayanus & Martin, 2008). If the teacher's self-disclosure is appropriate in amount and relevance, a positive relation with the student can be built (Allen & Court, 2009; Antaki, 2005) and the student may recognize themselves in the teacher and identify with them.

Identification

"The Identity refers to an individual's organized constellation of traits, attitudes, self-knowledge, cognitive structures, past, present and future self-representations, social roles, relationships and group affiliation" (Corey et al. 2016).

The process by which a person acquires, constructs, and forms knowledge about the self happens by two mechanisms, instrumental- and social self-analysis. Instrumental self-analysis happens through introspection, whereas the social self-analysis happens through comparing the self to other people (Alicke et al. 2013; Cooley, 1902).

Through interacting and comparing oneself to others, identification happens. Identification is a process, by which an individual takes on characteristics of an external object and internalizes it into the self-concept. In this identity formation process, in which an individual wants to be like someone else, that person consciously or unconsciously takes over traits, attitudes, attributes, goals, mannerisms, and behavioral pattern from the other person (Bekes & Perry, 2016).

There are two directions the comparison process can take place, either individuals contrast themselves downwards or identify upwards. A downward comparison is when a person compares with someone worse off, whereas an upwards identification is when a person

compares with someone they categorize as better. In a threatening situation individuals prefer to compare downwards in order to feel better about themselves, whereas an upwards identification happens when individuals recognize themselves in the other (Buunk & Ybema, 1997). Students may identify or recognize themselves and identify upwards to the teacher, which might evoke a positive affect and may have a positive influence on their student engagement.

Student-Motivation and Student-Engagement

As student motivation is the strongest predictor for academic achievement (Steinmayr, Weidinger,Schwinger & Spinath, 2019) and psychological well-being (Maric, 2012, it is crucial to look at and understand the mechanisms underlying motivation in order to implement them into the education environment. According to self-determination theory, students are motivated to take action for academic performance, when their behavior is self-determined, meaning to have an internal locus of control and being able to make their own choices. (Deci, Vallerand, Pelletier & Ryan, (1991). Self-determination theory states, that student's motivation is based on personal needs and desires, namely, competence, autonomy, and relatedness.

Student-motivation is related to student engagement, as it works as an important prerequisite for student-motivation (Deci, 2009). Student-engagement can be defined as a student's enthusiasm for academic achievement, voluntary will to learn and the willpower for success (Bomia, Beluzo, Demeester, Elander, Johnson, & Sheldon, 1997, p. 294). When a student is engaged in their learning process, they will participate with dedication, enthusiasm and high motivation in class. Therefore, not only student motivation, but also student engagement are important predictors for academic success (Harboura, Lauren, Chris & Lindsay, 2015).

Hypotheses

In line with the current findings, that teacher self-disclosure is related to student-engagement as well as student-motivation and that upwards or downwards comparison play an integral part in the identification process of a student, we hypothesize that self-disclosure from the peer- as well faculty-mentor will have a positive effect on student-engagement and that identification will mediate the relationship between instructor self-disclosure and student-engagement for both peer- as well as faculty-mentors (H1). Moreover, we hypothesize that students will identify stronger with the peer-mentor then with the faculty mentor as well as peer-mentor self-disclosure will have a stronger effect on student engagement then faculty-mentor self-disclosure (H2). Furthermore, we assume, that for peer- as well as for faculty-mentor relevance in self-disclosure will have a stronger effect on identification as well as student-engagement then amount in self-disclosure (H3).

Methods

Participants

All participants were first-year psychology students at the University of Groningen. Students from the academic skills class were invited to participate via WhatsApp, email, in person, or through an instructor. The data was gathered using an online questionnaire via Qualtrics. Of the 168 respondents, 96 were eventually included as participants in the dataset. This was because they had not completed the questionnaire in full or did not give consent. All participants gave consent to use their data.

Measures

Cayanus's and Martin's (2008) Teacher Self-Disclosure Scale was used to measure the teacher's self-disclosure in the classroom. The 14-item measure therefore asks students to report their impressions of their teacher's use of self-disclosure, which students did separately for peer- and faculty-mentors. Participants could rate each item on how well it applies to their

teacher on a seven-point Likert scale. The response-continuum thus ranges from (1) completely disagree to (7) completely agree. Further, the scale allows to differentiate between two aspects of self-disclosure: amount and relevance. Sample items were for instance "My peer/faculty-mentor often shares his/her dislikes and likes" (amount), "My peer/faculty-mentor uses his/her own experiences to introduce a concept" (relevance). Cronbach's alphas for this study for the peer-mentor were $\alpha = .83$ for amount, $\alpha = .88$ for relevance. Cronbach's alphas for this study for the faculty-mentor were $\alpha = .90$ for amount, $\alpha = .94$ for relevance.

To gain insight into the extent to which the students identified with their mentors, Ybema and Buunk's (1995) ´identification scale´ was used. The scale consisted of four questions ($\alpha = .85$), which the participants answered twice; once about the peer mentor and once about the faculty mentor. The participants were instructed to keep in mind 'how well the statements described their experience' with the specific mentor. To measure this, a 7-point Likert scale was used (1= not at all; 7= very much). Cronbach's alphas for this study for the peer-mentor identification were $\alpha = .88$ and for the faculty-mentor $\alpha = .90$.

Academic motivation was assessed, using the Higher Education Student Engagement Scale (HESES), (Zhoc, K. et al., 2018). The questionnaire was designed to assess student engagement, an observable indication of student motivation. The scale included 5 subscales, of which the academic engagement, cognitive engagement, social engagement, and affective engagement subscales were used as a performance measure to explore student motivation. The five subscales of online engagement were excluded, since it did not fit the context of the academic skills course. Cronbach's alphas for this study were (=0.70 to 0.87).

Procedure

The present study was part of a larger research project, that was designed as a bachelor thesis project. Ethical approval was obtained by the faculty ethics committee. Participants took part in an online questionnaire. There, participants were asked whether they are first year

psychology students who are currently taking the course 'Academic Skills'. Then, general information about the study was provided, and informed consent was obtained. The concepts of peer mentors and faculty mentors were brought to the attention of the participants after which general demographic information was collected (e.g., age, nationality). Participants were asked to think about their peer mentor or faculty mentor before answering relevant questions of the questionnaire.

Design

We planned a mediation analysis that was carried out as a correlational survey study. The mediating factor was identification, to assess the indirect effect, that self-disclosure (independent variable) has on student-outcomes (dependent variable). Self-disclosure was assessed on two levels, namely peer mentoring and faculty mentoring. Student outcome was measured through student-engagement. When filling in the questionnaire, students were asked to think about their peer-mentor or their faculty-mentor.

Results

After testing for normality, none of the assumptions were violated. Model 4 was used to do a mediation analysis. Women made up 72.9% of the sample (N = 78), men 24.3% (N=24) and 2.8% did not specify their gender (N=3). In table 1-3 you can find the descriptive statistics and Pearson correlations for *peer-mentor* self-disclosure, *faculty-mentor* self-disclosure and the relevance of *faculty-mentor* self-disclosure. In figure 1-3 you can see the mediation model for *peer-mentor* self-disclosure, *faculty-mentor* self-disclosure as well as for the relevance of *faculty-mentor* self-disclosure. We examined whether identification mediates the relationship between self-disclosure and student-engagement, for *faculty-* and *peer-mentors* separately. We specifically looked at the subscale's relevance and amount of self-disclosure. None of the mediation analyses were significant (figure 1,2).

Figure 1. Mediation model for *peer-mentor* self-disclosure
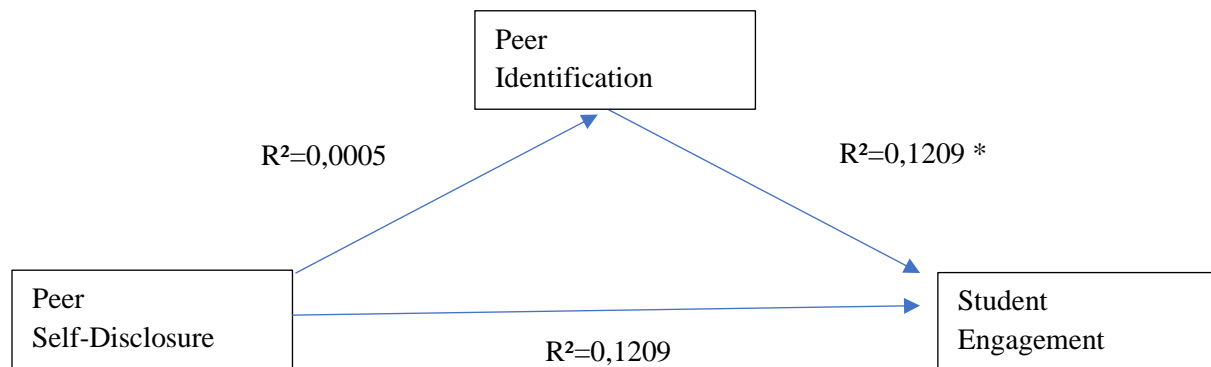
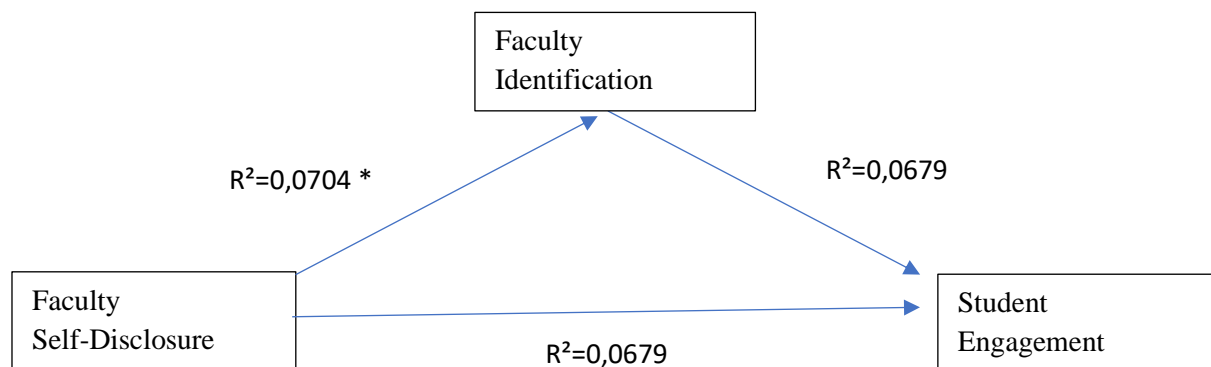*. Correlation is significant at the p<0.05 level (2-tailed)

Table 1

Pearson correlations, means and standard deviations for peer mentorship

	1.	2.	3.	Mean	SD
1. Peer-mentor Self-disclosure	-			41.04	4.66
2. Peer-mentor Identification	0.062	-		18.04	7.94
3. Student Engagement	0.126	0.327**	-	57.81	8.30

*Note.** The correlation is significant at the p<0.01 level (2-tailed).*

The indirect effect of *peer-mentor* self-disclosure on student-engagement through identification was not significant (B=0,0077; SE=0,0362; 95% CI [-0,0672,0,0776]). In the *peer-mentor* mediation analysis, a significant effect for the relationship between *peer-mentor* identification and student-engagement was found (R^2=0,1209; B=0,5821; CI [0,2351;0,9291]) (figure 1.).

Figure 2. Mediation model for *faculty-mentor* self-disclosure

*. Correlation is significant at the p<0.05 level (2-tailed)

Table 2

Pearson correlations, means and standard deviations for faculty mentorship

	1.	2.	3.	Mean	SD
1. Faculty-mentor Self-disclosure	-			35.07	10.37
2. Faculty-mentor Identification	0.244**	-		15.67	5.25
3. Student-Engagement	0.221**	0.193	-	57.81	8.30

*Note.** The correlation is significant at the p<0.01 level (2-tailed).*

The indirect effect of *faculty-mentor* self-disclosure on student-engagement through identification was not significant (B=0,0302; SE=0,0270; 95% CI [-0,0237,0,0851]). In the *faculty-mentor* mediation analysis, a significant effect for the relationship between *faculty-mentor* self-disclosure on faculty-mentor identification was found (R^2=0,0704; B=-0,1305; CI [0,0329;0,2281]) (figure 2.).

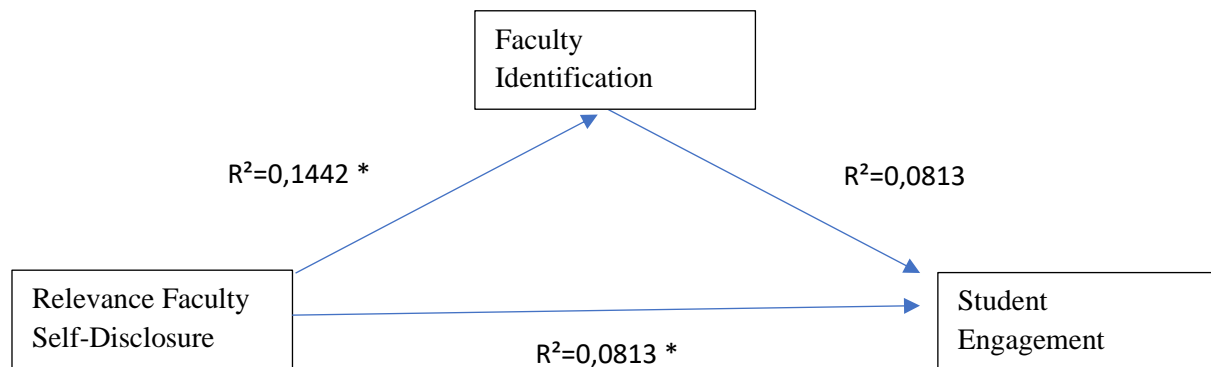**Figure 3.** Mediation model for relevance of *faculty-mentor* self-disclosure

Table 3

Pearson correlations, means and standard deviations for relevance of faculty-mentor self-disclosure

	1.	2.	3.	Mean	SD
1. Relevance Faculty-mentor Self-disclosure	-			57.81	8.30
2. Faculty-mentor Identification	0.383**	-		20.04	6.99
3. Student-Engagement	0.267**	0.193	-	15.67	5.25

*Note.** The correlation is significant at the p<0.01 level (2-tailed).*

Moreover, there was a significant effect for the relationship of the relevance of self-disclosure of the *faculty-mentor* on faculty identification (R^2=0,1442; B=-0,2782; CI [0,1394;0,4170]) (figure 3.). Another significant effect was found between the relationship of the relevance of self-disclosure of the *faculty-mentor* on student engagement (figure 3.).

Discussion

In this paper, we compared the relationship of self-disclosure from the peer-mentor, who acts as a social supporter, as well as faculty-mentor, who takes the role of a more

knowledgeable instructor on student-engagement and tested whether identification plays a mediating effect on either of those relationships.

We hypothesized, that identification would have a mediating effect on the relationship between self-disclosure from the peer- as well as from the faculty-mentor on student-engagement. Moreover, we hypothesized that self-disclosure from the peer- as well as from the faculty-mentor would have a direct effect on student-engagement.

Contrary to our hypothesis, we found that identification does not mediate the effect of instructor self-disclosure on student-engagement. Neither peer-mentor nor faculty mentor self-disclosure seems to have an effect on student-engagement through identification. Neither peer-nor faculty-mentor self-disclosure has a direct effect on student-engagement.

In examining the mediation model of peer-mentor self-disclosure on student-engagement, we did not find any mediating effects through identification. The relationship between peer-mentor self-disclosure on student identification was not significant but peer-mentor identification did have a significant effect on student-engagement. The result show, that students do not necessarily identify with their peer-mentor, when the peer-mentor self-discloses personal information. This could have various reasons, by disclosing personal information the instructor takes on the risk of being misunderstood (Ejsing, 2007). It does matter what the teacher is self-disclosing and how (Allen & Court, 2009; Antaki, 2005). When a peer-mentor self-discloses personal information, not every student might resonate with that or see themselves in the peer-mentor. However, our results show, that when students do identify with the peer-mentor, it seems to have a significant effect on their levels of engagement. This intuitively makes sense, as when a student recognizes themselves with the peer-mentor, they might strive to engage more in class. It might be that when they see the peer-mentor as a part of themselves, an upward comparison takes place (Buunk & Ybema, 1997), where a student would want to follow the peer-mentor's instructions. As we cannot assume directionality, another possible explanation for a positive relationship between

student-engagement and peer-mentor identification could be, that a student would be already engaged in the academic setting and therefore identifies with the peer-mentor. The self-expansion theory from Aaron et al. (2013) states, that people are motivated to expand their most basic human motives like self-improvement, opportunity, competence and the broadening of one's own perspective in close relationship, as in close relationships one sees the other as one's own. A student for example would be already motivated to learn and study and is striving to become a peer-mentor at some point as well and for that reason identifies with the peer-mentor. As we found results pointing that identification with the peer-mentor is connected to student-engagement it would be of interest for future research to look at what factors leads a student to identify with their peer-mentor.

The examination of the mediation model of faculty-mentor self-disclosure on student-engagement also shows that there is no mediating effect through identification. There is a significant effect between faculty-mentor self-disclosure and identification with the faculty mentor, but the relationship between faculty-mentor self-disclosure and student-engagement was not significant. This means, according to our results, that when the faculty-mentor self-discloses personal information, students identify with the faculty-mentor, but this does not seem to have a significant effect on the student's level of engagement in class. A possible explanation for the observed behavior is that the dynamic of the relationship between faculty-mentor and student changes, when the faculty-mentor starts to self-disclose information. Self-disclosure helps not only to build rapport and compatibility in relationships (Keller, 2005; Knapp &Vangelisti, 1992), a more positive classroom environment (Allen & Court, 2009), but also brings greater enjoyment into class (Sorensen ,1989). The relationship becomes more personal and students get to know, who the faculty-mentor is behind their instructor role. A sense of similarity and familiarity might arise as students would change their perspective of their mentor, seeing them as "more human", which may lead the instructor to be more likeable (Cayanus & Martin, 2008) and may lead to a recognition of themselves in the instructor.

Another possible explanation could be that, students, who are already identified with their faculty-mentor would connect more to the personal information the faculty-mentor shares.

These are interesting findings, we hypothesized that students would identify more with the peer-mentor than with the faculty-mentor, but we found the opposite. Self-disclosure seems to have a stronger effect on whether the student identifies with their instructor when it comes from the faculty mentor. One of the reasons, behind this finding, could be, that faculty-mentors are more knowledgeable and usually older than the peer-mentor and they may be seen as wiser and more trustworthy than peer-mentors. As older people are seen as more trustworthy than younger people (Phoebe, 2015), students may rather believe and follow up on the faculty-mentor's self-disclosure and identify with them instead of the more social and younger peer-mentor. As a peer-mentor is a peer, students might see themselves on the same level then their peer, which would make an upwards-comparison difficult. After the self-enhancement-principle people are motivated to compare themselves with people perceived to be superior (Wheeler, 1966). It could be, that students have higher aspirations and would rather compare upwards to the faculty-mentor instead of the peer-mentor.

In order to understand the effect better, that students identify more with faculty-mentor instead of peer-mentor, we assessed how the faculty-mentor discloses personal information. We looked at the amount as well as the relevance a faculty-mentor self-discloses to the class and found that, as we hypothesized, the relevance of what a faculty-mentor self-discloses is significantly more important, then the amount the faculty-mentor self-discloses. Students strongly identify and compare themselves upwards with the faculty-mentor when the faculty-mentor shares personal, but relevant information. Having a knowledgeable older instructor, who discloses relevant information, can indeed have a strong effect on a student.

The sharing of relevant personal information as a faculty-mentor is not only affecting how much the students see themselves in the instructor, but also seems to have a direct effect on student-engagement. Students can become more motivated when the faculty-mentor

discloses relevant personal information about themselves. These findings are in line with McCroskey et al., (2006) and Mazer et al., (2007) who found that teacher-self-disclosure was related to an increase in student-motivation. These findings support the findings of Punyanunt- Carter (2006) and Richmond, (1990) stating that a change in the communication strategies does influence student-motivation.

Nowadays students' demotivation is an acute problem (Rocca, 2010), it is difficult for instructors to engage students in their classroom. Students' academic engagement and motivation is important for academic success (Steinmayr et al., 2019) and well-being (Maric, 2012). Being able to know what internal as well as external factors influence student motivation is necessary in order to bring out a student's most academic potential. Knowing, that the communication strategies from an instructor can help facilitate an environment for high student-engagement is important to implement it in future teaching programs as the biggest amount of time and interaction in schools happens through communication between student and instructor (Wang & Dishion, 2012). Researching what exact communication strategies work best and what exact internal as well as external factors influence student-engagement is important in order to optimize the learning experience.

Our study was a prime study. Researching the factors influencing student-engagement and student-motivation is important in order to optimize the students' learning experience (Steinmayr et al. 2019). As being an engaged student is a prerequisite for being a motivated student (Deci, 2009), it is crucial to examine the exact mechanism and types of student-motivation and how they are connected to the self-disclosure of the peer- or faculty-mentor. Self-determination theory distinguishes between internal and external motivation. Intrinsic motivation is when you engage in a behavior for its own sake, without having the need of external rewards. Extrinsic motivation on the other hand is instrumental in nature, as you are doing something in order to achieve an external reward or to avoid punishment. There are four types of extrinsic motivation, which vary in the degree of their autonomy. It could be of

great benefit for future research to look at the five types of student motivation proposed by Ryan and Deci, 2000 and what role instructor self-disclosure as well as identification with the instructor play in that. Moreover, as our results show, that how to disclose personal information matter, future research can look at other dimensions of instructor self-disclosure. Cayanus, Martin & Eckhart (2011) have distinguished between 7 dimensions, which are: relevance, valence, amount, discreetness, character, intention and place (Kristina, 2013).

In order to further optimize academic interactions and academic performances of student and instructors, another important aspect to examine in the future is what other influenceable external factors facilitate optimal class-room performance. What factors influence student-engagement as well as student-motivation? What other communication strategies besides instructor-self-disclosure influence student-engagement as well as student-motivation? And what are the factors influencing students' identification with their instructor? In order to teach future mentors, the most efficient way of teaching, it would be of great benefit to integrate all aspects and factors, which can enhance the motivation and engagement of a student.

In our study we have faced several limitations, which are worth mentioning. Our results are limited by a small sample size. Moreover, all participants were first year psychology students from the university of Groningen, which limits our result to the group of first year students. Having a small sample size and only first year students as participants affects the external generalizability. The online survey about student engagement was taken in the end of the academic year, a time in which the engagement of students usually is subsiding (Julianne et al., 2014). As our research design was a cross sectional mediation analysis our data represents only one time point and cannot be compared over a period of time. For a more representational study, future research can focus on a longitudinal study.

In order to conclude, the findings of our study show, that identification with the peer- as well as the faculty-mentor does not mediate the relationship between peer- or faculty-

mentor self-disclosure. But we have found, that when students identify with their peer-mentor, that it does seem to strengthen the student-engagement. We have also found that there is a positive relationship between relevant information disclosed from the faculty-mentor and the identification of a student with the faculty-mentor as well as a positive relationship between the faculty-mentor and student-engagement. The relevance of the disclosed information from a faculty-mentor indeed has an effect on the academic engagement of a student as well as the how much a student sees themselves in their instructor.

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