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Facilitating academic and social integration among first-year university students: is peer mentoring necessary or an additive measure?

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ABSTRACT

Peer mentoring has shown beneficial effects in facilitating academic and social integration among first-year students in higher education. Previous research is, however, limited by the exclusion of a comparison group, to examine whether the integration process still occurs among non-mentored students, independently of peer mentoring. By using Tinto´s theoretical framework, we examine the effects of a formal peer mentoring program, comparing these effects on integration with non-mentored students. Data was gathered from focus group interviews and analyzed using thematic analysis. Our findings show that peer mentoring supports the integration process among first-year students, although the results suggest that it is not a necessary condition to ensure that integration occurs. Future studies should further extend the research to also include an evaluation of other activities taking place at the institution, to expand the knowledge of which measures facilitates the integration process.

Introduction

Successful transition to university and adaptation to new norms has proven essential for integration into higher education for university students. New students are met with challenges regarding the navigation of unknown surroundings, feelings of uncertainty and the responsibility of increased independence (Heirdsfield, Walker, Walsh, & Wilss, 2008), as well as coping with the overload of new information (Foy & Keane, 2017). Consequently, managing the transition process is essential for adjustment, promoting better integration (Reed, Kennett, Lewis, & Lund-Lucas, 2011). Successful integration increases perseverance among students, facilitating academic success (Schaeper, 2019) and preventing students from voluntarily dropping out of their study program at the university (Cabir Hakyemez & Mardikyan, 2021; Tinto, 1993).

One common measure to facilitate integration among first-year students in higher education is through peer mentoring programs (Lane, 2018). In these peer mentoring programs, the mentors are usually more experienced students, relying on their own experiences to help guide the new students (i.e. mentees) (Yomtov, Plunkett, Efrat, & Marin, 2015). Peer mentoring can occur individually between mentor and mentee, or in groups where one or a few mentors provide mentoring to a group of mentees (Huizing, 2012). Although the frequency of meetings can vary, the aim is to provide mentees with an introduction to academia, with mentors being able to relate to the needs of their mentees and share their knowledge accordingly (Lorenzetti et al., 2019). Implementation of mentor programs has shown beneficial effects on integration among first-year students (Lyon, Holroyd, Malette, Greer, & Bartolic, 2022). Hence, creating mentor programs could be an effective measure to integrate the students participating in these programs. However, few studies investigating peer mentoring and integration of students include an exploration of integration for students not attending mentor programs (Law, Hales, & Busenbark, 2020). That is, a gap in the literature is the lack of understanding of whether the mechanisms leading to successful integration occur similarly or differently for non-mentored students than for peer-mentored students. This study aims to help close this gap.

Thus, the main aim of this study is to understand the processes leading students to become academically and socially integrated. Specifically, we investigate whether peer mentoring programs implemented by universities are a source for integration, or whether this process occurs independently of peer mentor programs. Put in another way, is peer mentoring an additive mechanism that contributes to integration, or a necessary condition for integration? Although previous studies have investigated the effectiveness of mentor programs (e.g. Egege & Kutieleh, 2015), few studies have investigated the mechanisms that lead to integration using theoretical frameworks (Gershenfeld, 2014; Law, Hales, & Busenbark, 2020). Theory-driven research is important because it creates the foundation that the construction of the study is based on (Grant & Osanloo, 2014), and it connects current findings with previous literature, guiding future research (Lane, 2018). Thus, to further contribute to the literature, a secondary goal of our study is to employ a theoretical framework to investigate the underlying processes of integration. In particular, we employ the Longitudinal model of institutional departure (Tinto, 1993) to interpret our findings.

Theoretical framework

Central to the Longitudinal model of institutional departure is that students' formal and informal institutional experiences are important for the extent to which they experience academic and social integration at their institution. The

model proposes that integration is essential in explaining departure and academic success (Tinto, 2006/2007). New students enter the institution with different backgrounds, skills and previous educational experiences, which impacts their intentions, or individual educational goals, and commitment towards the institution. The experience of academic and social integration whilst enrolled will further impact the future intentions and commitment to the institution (Tinto, 1993). Academic integration consists of congruence of academic values with the institution, often facilitated by interactions with faculty and staff, preventing academic dismissal. Students also interact with the social systems of the institution, and social integration is facilitated by interaction with peers in, and outside of, the formal systems of the institution. In contrast, lack of social integration can be accounted for by social isolation (Tinto, 1993). According to the model, positive integration will strengthen students' goals and commitment to the institution, whereby reducing the likelihood of voluntary departure (Tinto, 1993).

Previous research on the effects of peer mentoring on integration

Previous studies have investigated the effects of peer mentor programs on the academic and social integration of first-year students. Peer mentoring has been found to increase deep learning and academic performance (Chester, Burton, Xenos, & Elgar, 2020; Leidenfrost, Strassnig, Schütz, Carbon, & Schabmann, 2014), general adjustment and orientation of the campus norms (Olivier & Burton, 2020) and improve the quality of student learning (Petrescu et al., 2021). Peer mentors have been found to help normalize the academic challenges experienced by first-year students (DeMarinis, Beaulieu, Cull, & Abd-El-Aziz, 2017; Flores & Estudillo, 2018), as well as providing mentees with academic resources (Cornelius, Wood, & Lai, 2016), which could explain why these positive effects on academic integration occur. Socially, peer mentors offer immediate social contact and make new students feel welcome (Hogan, Fox, & Barratt-See, 2017), and this form of psychosocial support has been shown to reduce stress (Fullick, Smith-Jentsch, Yarbrough, & Scielzo, 2012), as well as decrease the perceived experience of loneliness amongst first-year students (Raymond & Sheppard, 2017). Overall, peer mentoring has been shown to lead to higher well-being, due to an achieved sense of belonging to the institutional community (Chanchlani, Chang, Ong, & Anwar, 2018; Egege & Kutieleh, 2015).

The relationship between mentor and mentee seems to be an important factor in how successful mentor programs are for the integration of mentees (Colvin & Ashman, 2010). Mentees who attribute positive interpersonal qualities to their mentors, also report feeling their mentors helped them get integrated (Yomtov, Plunkett, Efrat, & Marin, 2015). Findings further indicate that when mentees themselves choose their mentor, there is an increase in both satisfaction and feelings of

commitment towards maintaining a relationship with the mentor (Flores & Estudillo, 2018). Interestingly, some findings suggest that it could be valuable to the success of peer mentoring to consciously match mentees with mentors based on characteristics (Dudley, Menon, Mosleh, & Leadbeatter, 2022). In sum, these findings suggest that successful mentor programs rely on successful interpersonal relationships between mentor and mentee.

Furthermore, mentor programs are differentiated between having a formal or informal structure (Tsang, 2020). Formal programs tend to be initiated by the institution, providing a clear structure where the faculties are involved in the processes in which mentoring occurs. Informal mentoring can be initiated either by a mentor or mentee and is largely dependent on the students themselves to organize the mentoring without much involvement from faculty (Inzer & Crawford, 2005). Some previous findings suggest that giving peer mentors more freedom to run their mentoring as they see fit, compared to having them follow a more formal structure, is a better implementation of such a program (Lyon, Holroyd, Malette, Greer, & Bartolic, 2022). On the contrary, other findings indicate that student-led designs can be experienced as challenging by the mentees, due to the unclarified relationship between themselves and their mentor, suggesting that departments and faculties should be more involved in the program (Dudley, Menon, Mosleh, & Leadbeatter, 2022). Therefore, the structure of the program seems to be an important variable affecting the outcomes of the program.

While peer mentoring has shown beneficial effects on academic and social integration among first-year students, most studies are conducted without a non-mentored comparison group (Gershenfeld, 2014). Studies investigating integration for non-mentored students find varying results. Some show that mentored students experience higher levels of integration (Collings, Swanson, & Watkins, 2014; Larose et al., 2011; Yomtov, Plunkett, Efrat, & Marin, 2015), whilst others find smaller differences in integration (Alonso, Castano, Calles, & Sanchez-Herrero, 2010; Li, Wang, Lin, & Lee, 2011), as well as academic outcomes (Hillier, Goldstein, Tornatore, Byrne, & Johnson, 2019). Inconsistencies in previous findings illustrate the need for more research conducted with a comparison group of non-mentored students (Egege & Kutieleh, 2015; Jacobi, 1991).

The current study

Increased understanding of the integration process experienced by both mentored and non-mentored students will further expand the knowledge of the effects of peer mentoring programs. We investigate these effects by using the theoretical concepts of academic and social integration proposed by Tinto. To explore this in more detail, the following research question is addressed: 'to

what extent does a mentor program facilitate academic and social integration and does such integration occur independently of peer mentoring?'.

Study context

Six faculties at a large university in Norway have implemented the mentor program, which is a formal program that had its pilot run in 2019. Although the overarching program is the same across faculties, each faculty has some degree of freedom in how they run the program. Most first-year students are offered a peer mentor (excluding some students from one-year program studies, depending on the faculty), and participation is voluntary. Mentoring occurs in groups of approximately 20 mentees, and one, sometimes several, mentors. The mentors are more advanced students from the same faculty, and usually from the same study program. Mentees first meet with their mentors within the first few weeks of the semester, as part of their introduction to university. Meetings continue throughout the first academic year.

The goal behind the program is to ensure academic and social integration among first-year students at the university. To ensure that integration occurs, mentors receive training aimed at understanding the role of a mentor, how to facilitate communication and create a sense of belonging in their group of mentees. Mentors are required to attend training, which occurs at the beginning of the semester, the week before the new students arrive on campus. All mentors receive financial compensation from the university for their time spent training and having mentor meetings with their mentees. Mentors are encouraged to introduce their mentees to campus and the study program, as well as initiate social activities aimed at facilitating social interaction and letting their mentees get to know each other.

In addition to the mentor program, first-year students are also invited to attend the 'buddy-program' by their faculty, which occurs during the first week of the first semester. The 'buddy-program' is also led by more advanced students from the same study program. The program usually consists of activities after school hours, with the aim of facilitating social interaction among the new students. First-year students further attend academic seminars during their first academic year, led by more advanced students, which is a supplement to lectures aimed at providing academic support.

Methods

Participants

The total amount of participants ($N = 33$) consisted of Norwegian higher education students who either had participated in a formal mentor program, i.e. mentees ($n = 29$) or students that did not participate in such a program, i.e. non-

mentees (*n* = 4). Mean age was 21.4 (range from 18 to 42 years) for mentees, and 25.4 (range from 19 to 38) for non-mentees. The participants were from a large university drawn from five faculties: social science (*n* = 19), mathematics and natural sciences (*n* = 1), psychology (*n* = 4), medicine (*n* = 6), and humanities (*n* = 3).

The following selection criteria were chosen for recruiting participants: Students had to be first-year students who either had experience with a mentor program or did not have such an experience. Participants had to be current first-year students, however, students with previous degrees were also included. The sampling strategy was stratified purposive sampling (Suri, 2011), employed to ensure participation from each faculty at the university.

Procedure

First-year students were recruited through online registration posted by each faculty's Learning Management System. General information about the study was provided to the students with a link for a digital form. Students who were willing to participate were asked to sign up for one of the pre-determined time slots for the interviews. The form required them to fill out contact information, which included email and phone number. They did not sign up with their names. The students were then contacted by the first author with confirmation and additional information about the focus group interviews.

We conducted six separate focus group interviews with mentees and one focus group interview with non-mentees. All interviews were conducted on campus during the first semester, as well as at the beginning of the second semester. The focus groups included between 4–6 participants per focus group interview, and each interview lasted on average 1 hour and 30 minutes (minimum = 1.10 hrs., maximum = 1.40 hrs.). We aimed at conducting six interviews because recent research has suggested that data saturation with focus group interviews is met between 4–8 interviews (Hennink & Kaiser, 2022), and included 4–6 participants per focus group based on recommendations (Kitzinger & Barbour, 2001). We attempted to ensure that each focus group interview was diverse in terms of faculty affiliation. The interviews were led by one of the authors, and the other author would take notes during the focus group interviews and ask follow-up questions.

Methodological design

We employed a qualitative design using focus group interviews for data collection. Focus groups were chosen because it may encourage more sharing and interpersonal discussions and reflections which may have not been possible with individual interviews (Kitzinger & Barbour, 2001). We employed a semi-structured interview for each of the focus group

interviews, and the same interview guide was employed across each interview for the participants with the mentor program experience (see Appendix A). For non-mentees, we only removed the reference to the mentor program and made slight adaptations for fluency purposes (see Appendix B). The interview guide was developed by the two authors and based on the Longitudinal model of institutional departure (Tinto, 1993), and specifically on the theoretical conceptualization of academic and social integration.

NVivo 12 was employed to code our data (Mortelmans, 2019). Thematic analysis was used to analyze our data, which is a method for identifying, analyzing, and reporting themes/patterns within data (Braun & Clarke, 2006). Following recommendations from Braun and Clarke (2023), the following steps was taken to ensure fidelity within thematic analysis. First, our ontological and epistemological stance is based on our theoretical approach, as it provides a framework in which the research design and interview guide is reflected. Second, we employed a deductive approach in which our data analysis is driven by the theoretical conceptualization of academic and socially integrated students. Third, our identification of themes follows a semantic approach in which the themes go from description to interpretation. Finally, the following phases were done when analyzing our data. All interviews were read thoroughly to familiarize ourselves with the data, before initial codes were generated. We then searched for themes within our codes, reviewed them, and named our final themes (Braun & Clarke, 2006).

Several ethical concerns were addressed prior to data collection. The study was registered in line with guidelines at the authors' institutional ethical review board (System for Risk and Compliance). Upon arrival, all students were handed a consent form that was signed by the students in order to participate in the study. The students were informed that participation was voluntary and that they could withdraw from the study at any time, in which case their data would be deleted. All names and sensitive information are anonymized or deleted, if any. All focus group interviews were audio recorded and transcribed verbatim. All audio tape recordings were deleted after transcription, coding and analysis were completed. The first authors transcribed all the focus group interviews. After participation, the students were given a gift certificate for 150 NOK (approximately 14 USD) and given the opportunity to ask follow-up questions.

Results

The analysis was performed with the intention to answer the following research question 'to what extent does a mentor program facilitate academic and social integration and does such integration occur independently of peer mentoring?'. Below we present the themes and sub-themes from our analysis of the focus group interviews.

Academic integration

We found three subthemes within the theme of academic integration. The first theme was interaction with faculty and staff. Across focus groups, students mentioned how they felt that some lecturers could be reached out to, whilst others would rarely answer academic questions. Asking questions in a larger auditorium was not always easy, as one student explained: '*In lectures the threshold for asking questions is high because there is a hundred people there and you sit there with the feeling that you are the dumbest person in the room*'.

Another prominent subtheme of academic integration was the academic seminar program at the university. We found that mentees kept referencing these seminars when asked about academic support. One mentee mentioned that in terms of academic questions: '*I would ask my seminar leader [. . .]. She is the one that has helped me with stuff, it would not occur to me that the mentor-, I would not have imagined that that would have been the mentor's job*'. This was evident in the data from non-mentees as well; for academic questions, the norm was to turn to seminar leaders for help. One non-mentee explained: '*We would have two [seminar leaders], we would be fifteen-twenty [students], and it really helped because we could ask questions and receive answers*'.

The mentor program was experienced as useful for mentees for the more practical orientation at the beginning of their study program. As one mentee stated: '*Some practical things came from the mentor program, we have had meetings with, I mean, how to connect to the internet, how to use the printer, practical stuff that you need but that you don't necessary know how to get fixed, so I have gotten that through the mentor program, I think that is good*'. For non-mentees, our analysis suggests that attaining practical information is conceived through other sources such as seminar leaders, older students, or peers from the same study program. One non-mentee explained: '*In our study program we are very close with [more advanced students from the same study program], everyone from first to fifth year spend a lot of time together, so I know many of them and they are the ones I would ask*'.

Social integration

Within the broader theme of social integration, we found three subthemes. The first theme, social interaction, was found to occur in multiple settings and with multiple groups of people across the focus groups. This included extracurricular activities, the 'buddy program' at the beginning of the semester, and social gatherings outside of campus. Most mentees experienced the mentor program as mainly social, with the aim of helping them interact with their fellow students resulting in them obtaining a social network. One mentee explained: '*I thought the mentor program was pretty okey, it was a nice way to get started, get to know each other, you have to throw yourself out there even if the [icebreaker] games are*

a little bit awkward then and there, it helps to get started'. Interestingly, students not participating in the mentor program reported having less of a need to socially interact with other students, and instead being more focused on their studies. One non-mentee explained: *'[The reason] I chose to not participate in the "buddy-program" was because I had participated in it before, and for me this is just another degree to help me find work later, and therefore I thought that it was not that important*'. We found that the same argument was used to explain why non-mentees chose to not participate in the mentor program as well.

As with academic integration, the seminar program is mentioned by all students across the groups as a means for social integration. This is mostly due to the smaller classrooms and smaller groups of students attending each seminar (as opposed to lectures), and how that, in turn, facilitates conversations between peers. As one student stated: '*[Seminars] give a kind of frequent meeting with people in a way, and if you are reading alone one week, at least you meet people at the seminars*'.

One final subtheme of social interaction was found to be loneliness. Students across the groups had different perspectives on whether loneliness was a prevalent issue at the university, however, there was an evident agreement that students themselves were responsible to take the initiative in creating a social network. Some mentees argued that mentor meetings provide an opportunity to meet with peers, while others argued that a meeting place itself does not help; rather it depends on each student's own initiative to make friends. One mentee explained that: '*I don't know if it could have contributed to the fact that in private people would hang out, if so, it would have been that possibly you had planned something when you were at the mentor meetings, it would have been weird if the mentors just said, yes you and you are going to meet up in your free time*'.

Mentor characteristics

We found two subthemes within the theme of mentor characteristics. One persistent finding across the focus groups with mentees was the importance of the interpersonal relationship between mentor and mentees, or affiliation. Mentees who reported having a good relationship with their mentor also reported finding the mentor program more useful. One mentee explained: '*I find [the mentor] to be very social, outgoing and helpful, and very like don't hesitate to ask questions and I've sort of called her if I need it, she was on holiday and I asked her if I could I ask her something, she was like yes, I'm on the beach, just call, so then we had a nice conversation, it feels very personal*'. Another mentee had a different experience of the mentor, explaining how '*I have much better experiences at seminars, almost like if I had a question I would ask a seminar leader, I think [the mentor] is a bit too reserved maybe, not necessarily for taking responsibility, but when it comes to guiding a group, she is probably a bit too calm*

maybe, I would-, I might have needed a slightly more energetic person who motivated more'. The other subtheme revolved around how the mentors planned the mentor meetings. Some mentors followed the instructions given by their faculties on how to structure their mentor meetings more loosely than others. One mentee explained: '*My [mentor] was never well prepared, he is a cool person, but that is kind of the impression I am left with'*, whilst another mentee noted: '*They [mentors] always have a plan for where we are going to be and what time we are going to meet and so on, and when they have had presentations they have it for so and so long and then questions afterwards and so yes, I feel they have a plan'*. Some mentees further noted how at times, it could have worked better if the mentor could deviate from the preplanned content for the meetings, and rather respond more actively to what the group of mentees needed at that specific time. This was explained by one mentee: '*I felt they had a plan that they had to commit to follow, and the best advice that came from the mentor, usually came outside of the scheme in a way, with tips and tricks'*.

Organization of mentor meetings

The subtheme of organization of mentor meetings was found to be scheduling. It became evident early in the analysis that the number of mentor meetings the mentees had and how frequent they were varied across study programs and faculties at the university. A conversation between two mentees from different faculties show this difference: '*But do you still have mentor meetings?'. 'Yes'. 'Like during study time now?'. 'Yes, we will have them the whole year, next semester as well I think'. 'We are not doing that'*. Some mentees would have frequent meetings with their mentor group, while others only met with their mentor group in the beginning of the semester and were not aware of any future scheduled meetings.

Commitment

We found one joint subtheme across focus groups, and one subtheme specific for mentees which revolved around commitment for the mentor program. Attendance in mentor meetings varied, but overall, attendance was quite low and decreased rapidly after the first week. Mentees participating in the focus groups were among the students who would regularly attend the meetings and would most likely attend future meetings. When asked if they would recommend new students to attend the mentor program, every mentee said that they would. '*I would recommend that they try it, but I think from my perspective I would say that you get more out of it socially than academically'*.

Intentions were found to be a subtheme across the focus groups. Some students mentioned that they were considering leaving and applying for a different study program (either at the same university or another institution),

however, most participants had intentions of finishing the study program they were currently enrolled in, regardless of participation in the mentor program. This was also true for participation in other programs at the university, suggesting that student's commitment to their study program is independent of both the mentor program and the academic seminars.

Discussion

The main aim of this study was to investigate whether peer mentoring facilitates academic and social integration among first-year students, and if integration occurs independently of the mentor program. In general, we found in our analyses that participating in the mentor program provides support during the process of academic and social integration; however, we found no large discrepancies in integration between mentees and non-mentees. Both academic and social integration occur in other arenas, including the 'buddy-program' and academic seminars, suggesting that peer mentoring is additive, but not a necessary condition to ensure integration.

Academic and social integration

One prominent benefit of peer mentoring is the initial support mentees receive upon entering university, as their mentors introduce them to campus, the Learning Management System and function as a resource for information and guidance. Mentees seem to rely on their mentors for such practical orientation at the beginning of the semester, as the threshold to approach mentors about what is perceived as 'stupid questions' is lower than asking other faculty members. Non-mentees also reported seeking guidance on practical orientation from peers, however in a more unstructured manner. These findings might suggest that peers are more reachable than lecturers and other faculty staff and that first-year students will align themselves with both their fellow first-year students and more advanced students for guidance. Mentors being helpful for such practical information, due to them being more approachable than lectures and other faculty staff, is consistent with previous research (DeMarinis, Beaulieu, Cull, & Abd-El-Aziz, 2017; Flores & Estudillo, 2018; Hogan, Fox, & Barratt-See, 2017; Olivier & Burton, 2020). Tinto proposed that interaction with faculty and other staff members was essential in preventing academic dismissal (Tinto, 1993), however, our findings suggest that the interaction with more advanced students is more significant for first-year students.

It appears that the mentor program is more valued for practical orientation than direct academic help with coursework or other academic questions. Mentees would rather reach out to their seminar leaders for academic questions, which was reported by the non-mentees as well. Our findings imply that students, in general, experienced the seminar program as an arena for academic

integration, and that mentees find it more natural to discuss their coursework in seminars compared to with their mentors. Perhaps the mentor program would be experienced as more of an arena for academic integration if the students did not attend academic seminars as well. More research is needed to compare mentor programs to other activities on campus to further investigate if mentor programs contributes to academic integration.

Most mentees experienced the mentor program as a means for facilitating social interaction with fellow students, which, according to Tinto, is crucial to achieve social integration (Tinto, 1993). Attending mentor meetings meant participating in icebreaking games and ultimately becoming more comfortable with peers. Several mentees mentioned that the mentor program was a great way of getting started with building their social network, which has also previously been found as a goal for peer mentors (Honkimäki & Tynjälä, 2018). As time progressed, however, mentees started organizing social gatherings by themselves and did not feel the same need to attend meetings with their mentor. We found a decrease in attendance after the first week of mentor meetings, which could suggest that social integration had already occurred. Interestingly, previous findings suggest that the main effects of social adjustment occur at the end of such a program, as creating relationships for social development is a long-term process (Larose et al., 2011). One possible explanation for our findings is that students still attended the academic seminars, which students experienced as a social arena, as well as an academic one. Students meet in smaller groups and are actively involved in discussions with peers, promoting social interaction. In addition, social interaction was found to occur in the 'buddy-program', as well as extracurricular activities. Such activities also constitute what Tinto referred to as social integration (Tinto, 1993). Our findings suggest that building social relationships still requires time, however, students found other platforms to build these relationships, rendering the mentor program as less crucial. We further found that the reasons why non-mentees chose not to attend mentor meetings were because they perceived the program as mostly social and felt that their time was better spent focusing on their studies, and because they reported building social networks in lectures and seminars. There seem to be differences among students in the perceived need for social support and help-seeking behavior, determining whether they attend mentor meetings or not, which is consistent with previous findings (Larose et al., 2009). Therefore, these findings could speak more about the nature of the students, and not necessarily tell us much about the perceived effectiveness of the program. Some previous findings further suggest that peer mentoring could decrease loneliness amongst first-year students (Raymond & Sheppard, 2017), as well as among graduate students (Oddone Paolucci et al., 2021) however; research on peer mentoring and loneliness is rather limited. Our findings

suggest that developing a social network largely depends on one's own initiative to create friendships. Mentor meetings provide a meeting place to build social connections; however, social interaction can only be initiated by the mentors and not be forced upon the mentees. Consequently, peer mentors might rather function as an indirect contributor to decrease loneliness among their mentees. One possible explanation for our findings might be that the current program would need to focus more directly on preventing loneliness, perhaps by being differently executed or structured. However, there is no consensus in the literature as to what would be an optimal structure or what the role of the mentor should be to reduce loneliness, or what an optimal structure would be for mentor programs in general (Brondyk, Kochan, & Searby, 2013). There could therefore be variables promoting decreases in loneliness among mentees missing from the current program.

Mentor characteristics

In line with previous findings (Colvin & Ashman, 2010; Flores & Estudillo, 2018; Yomtov, Plunkett, Efrat, & Marin, 2015), our study suggests that the relationship between mentor and mentee is crucial for mentees' experience of the program, as mentees with a negative impression of their mentor or mentors report fewer benefits from attending the program. Mentors being perceived as outgoing and energetic, as well as being able to guide the group, seem to be valued highly. There are indications that it could be valuable to look at characteristics of mentors in paring with mentees (Dudley, Menon, Mosleh, & Leadbeatter, 2022), although other findings suggest that pair compatibility is not crucial for the success of the program (Fleck & Mullins, 2012). We found no mention of either support or opposition for purposively pairing mentor and mentees in our results, however, we did not specifically ask about pair compatibility during our interviews, which could explain why it was not mentioned. Although our results don't contribute to the discussion on pair compatibility, our findings contribute to the literature by highlighting the importance of a functioning interpersonal relationship between mentor and mentees for the success of the program.

Although the mentor program is organized by the university, and mentors are given guidelines on how to organize their mentor meetings, some mentees felt that their mentors were not well prepared, indicating some differences in how mentors organized mentor meetings. Others mentioned how at times, the meetings felt too organized, preventing the mentors to spontaneously respond to the present needs of their group. The discussion on formal or informal peer mentoring is excessive (Dudley, Menon, Mosleh, & Leadbeatter, 2022; Inzer & Crawford, 2005; Lyon, Holroyd, Malette, Greer, & Bartolic, 2022; Tsang, 2020), and no clear conclusion can be drawn from either the literature or the results

of our study. Our findings do indicate, however, that having a clear structure for the meetings ensures that mentees receive all the practical information that they need. It could further be beneficial to allow peer mentors to sometimes deviate from the pre-planned structure, allowing the meetings to be more need orientated.

Organization of mentor meetings and commitment

Interestingly, the frequency of mentor meetings varied between the mentor groups. Some mentees had not heard from their mentors in a while, as their mentors had not initiated further contact. This has been found to be a downside of formal mentor programs, due to a lack of initiative from the mentors (Collings, Swanson, & Watkins, 2015). On the contrary, informal programs often depend on both mentors and mentees to organize meetings, naturally encouraging initiative from both parties. However, there is no consensus in the literature on how many meetings mentees should have with their mentors, or for how long meetings should occur (Law, Hales, & Busenbark, 2020). Perhaps the number and frequency of meetings necessary is dependent on the needs of the mentees and should be planned accordingly. Our findings further indicate that mentees would attend future meetings; a finding relevant for both mentees with regular meetings, and mentees who had not met with their mentor group for a few months. Reasons for this were found to be fear of missing out socially or the need for further practical help on topics such as exams or coursework for the next semester. Our findings could indicate personal differences in the perceived need for mentor meetings between mentees. Mentees would also recommend new students to attend mentor meetings. Fear of missing out from the social gatherings at the beginning of the first year at university and therefore not building a social network was the reasoning behind it, because the mentor program (as well as other activities in the beginning of the semester) provide an arena for meeting fellow students.

Most of our participants had intentions to finish their current study program. The students considering leaving their study program were unsure if the program was a good match and were interested in exploring other programs and job opportunities. Tinto argued that positive academic and social integration reduces student attrition (Tinto, 1993), and previous findings suggest that peer mentoring reduces the likelihood of students leaving their institution (Collings, Swanson, & Watkins, 2014). However, we did not find a connection between participation in the mentor program and increased commitment to the institution. One possible explanation for our findings is that the interviews were conducted during the first half of the first academic year. Most students who leave their study program leave before their second year (Opazo, Moreno, Álvarez-Miranda, & Pereira, 2021). We might have found a stronger connection

if the interviews were conducted closer to the end of the first year. Longitudinal research on the matter could therefore be beneficial.

Limitations

There are several limitations that are worth mentioning when interpreting our results. One limitation is the uneven number of participants from each faculty. In a similar vein, one faculty was missing in our sample. The experience of integration from the missing faculty could have been different than from the faculties included in our sample. However, we found several similarities across the faculties in our sample, and the differences between the faculties seem to be in terms of structure and organization, and not due to the nature of the faculties. We are therefore confident that no important missing information was not included by not having all faculties represented or uneven number of participants from each faculty.

Further, our sample consisted of participants from the same higher education institution, which could be considered a limitation. We recommend that future studies include participants from several higher education institutions in order to analyze cross-institutional differences in academic and social integration. Additionally, including former students who have left the institution of higher education in the sample could be beneficial to explore the relationship between mentor programs, other student activities, and student attrition.

Yet another limitation is the sole reliance on qualitative data. Given the nature of our sample, we are not able to generalize our results to other students. However, we were interested in the students´ experiences of mentor programs as a means of academic and social integration. A strength of this study is the inclusion of a non-mentee group for comparison, and although it could be argued that the non-mentee sample size could have been larger, the similarities of our findings across these groups suggest that the occurrence of integration does occur independently of mentor programs. If anything, this study shows why the inclusion of a control group is important for future research. It would also be beneficial to investigate other activities students are involved in, to exclude that the effects of a mentoring program stem from other sources.

A final limitation in our analysis is our deductive approach. The sole use of the Longitudinal model of institutional departure and the use of thematic analysis excludes us from interpreting our results through the lenses of other theoretical frameworks or discovering hidden themes. We recommend future studies employ a more diverse theoretical basis in their analysis.

Conclusion

Our study proposes that peers and fellow students at the institution are crucial in first-year students' experiences of academic and social integration,

both within and outside the formal peer mentoring program. Our findings support Tinto´s emphasis on interaction with peers as essential for social integration, although we further propose that these interactions are essential for academic integration as well, compared to interaction with members of faculty. An exploration of other activities occurring at the institution should be included in future research to further increase our understanding of the processes that lead to successful integration into institutions of higher education.

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Appendix A

- **Q1**:the first thing we thought to ask you, as a kind of introduction, is if you can briefly say what you are studying and what faculty you are studying at?
- **Q2**:You have been going to university for a couple of months, but can you say something about what it was like to start at university?
- **Q3**:A little bit about the mentor meetings. What has it been like to attend the mentor meetings?
- **Q4**:We thought we could talk a little bit about what you do at the mentor meetings.
- **Q5**:Do you feel that the mentor meetings have given you any information about academia, i.e. studying at a university?
- **Q6**:In general, do you find that you can contact your lecturer or seminar leader if you have any academic questions?
- **Q7**:We have talked a lot about the academic aspects, what is the social life like as a student?
- **Q8**:Can you say something about how you experienced your mentor?
- **Q9**:There has been a lot of talk about loneliness among students in higher education recently, do you find that there is a lot of loneliness among students?
- **Q10**:Does anyone plan to continue with the mentor meetings next semester?
- **Q11**:Would you recommend others to participate in the mentoring program? (why/why not?)
- **Q12**: what is your plan going forward with your studies?

Appendix B

- **Q1**:the first thing we thought to ask you, as a kind of introduction, is if you can briefly say what you are studying and what faculty you are studying at?
- **Q2**:You have been going to university for a couple of months, but can you say something about what it was like to start university?
- **Q3**:Who did you feel helped you get started with your studies?
- **Q4**:What does a normal day at university look like?
- **Q5**:Where and by whom do you feel that you get information about academia, i.e. studying at a university?
- **Q6**:In general, do you find that you can contact your lecturer or seminar leader if you have any questions academically? Is there anyone else you can ask academic questions?
- **Q7**:We have talked a lot about the academic aspects, what is the social life like as a student?
- **Q8**:Can you say something about how you experience your seminar leader?
- **Q9**:There has been a lot of talk about loneliness among students in higher education recently, do you find that there is a lot of loneliness among students?
- **Q10**:what activities do you plan to participate in this semester (lectures/seminars/ other?)
- **Q11**:What would you recommend other students to attend in order to get the best possible academic benefit? Of academic stuff? And what about socially?
- **Q12**:what is your plan going forward with your studies?