First-year students' social adjustment process in professional higher education: key experiences and their occurrence over time

Abstract

The social adjustment process is a prominent factor in the literature on the transition to higher education (HE). This vast body of research, however, has predominantly focussed on academically oriented first year higher education (FYHE) contexts, leaving professionally oriented programs (providing vocational education that prepares students for a particular occupation) rather underexamined. Therefore, this study set out to explore what first-year students in professional HE contexts perceive to be the most important social experiences associated with their adjustment process in the first semester of FYHE. Furthermore, this study examines the extent to which the uncovered key experiences associated with social adjustment are reported at different times. Hereto, drawing on the critical incidents technique, qualitative data were collected from 104 purposively selected freshmen, enrolled in a Flemish (Dutch speaking part of Belgium) university college which offers professional HE programs, such as social work and nursing. At the start of the second semester of FYHE, these respondents completed 'reflective logs' wherein they reflected on three critical social experiences during their first semester in HE. Firstly, a qualitative content analysis revealed that students report on five overarching themes: (1) Dealing with the unknown, (2) Establishing a first connection, (3) Establishing a deeper connection, (4) Support from peers and others, and (5) Loneliness. Secondly, a quantitative analysis of code occurrence suggests that these five uncovered themes seem to be more significant at different times in the first semester of FYHE. Implications of the findings for the development of guidance and coaching initiatives are discussed.

Keywords: transition to higher education, professional higher education, social adjustment process, critical incidents

Introduction

The transition to higher education (HE) demands an adjustment of the student to the new learning environment. Next to academic adjustment, several authoritative models (e.g. Braxton et al. 2013; Tinto 1975) have also placed emphasis on social adjustment as a prominent factor in the freshmen's transition process. Today, various lines of evidence suggest that first-year students' social adjustment is related to important student outcomes, such as well-being (e.g. Bowman 2010), motivation (e.g. Noyens, Donche, Coertjens, Van Daal, & Van Petegem 2019), and academic success (e.g. Robbins et al. 2004).

Moreover, previous research has demonstrated that well-crafted interventions targeting the social adjustment of first year higher education (FYHE) students, might have beneficial effects on such student outcomes (De Clercq, Michel, Remy, and Galand 2019; Harackiewicz and

Priniski 2018). However, for the development of FYHE guidance and support initiatives, HE administrators depend upon clear handles and guidelines provided by empirical research.

Although a plethora of qualitative and quantitative studies from different strands of research delved into students' perception of their social experiences in FYHE, this research has been mostly carried out in academically oriented contexts (offering theoretical and scientific education). Indeed, more professionally oriented tertiary education programs - which organise vocational education that prepares students for a particular occupation - are rather underexplored, *especially* in research in European settings.

As institutional and disciplinary differences might influence social adjustment (e.g. Deil-Amen 2011; Mayhew, Rockenbach, Bowman, Seifert, and Wolniak, 2016), this hampers the development of instruments for the identification of at-risk freshmen or the design of guidance and support initiatives to facilitate students' social adjustment in professional HE programs (Gale and Parker 2014). Therefore, in this study, we aim to expand the current understanding on how first-year students in professionally oriented programs experience the social adjustment process. In what follows, we firstly describe the Flemish (Dutch speaking part of Belgium) HE system, after which the existing literature on the social FYHE experience (in academically oriented contexts) is explored and problematised.

Research context: Flemish HE system

Like many other European countries (e.g. Germany, Netherlands, Finland, Denmark, Portugal), Flanders (Dutch speaking part of Belgium) has a 'dual' HE system: academically oriented HE is provided by universities, while professional HE is offered by specialised institutions. In Flanders, these latter institutions are named university colleges (Camilleri, Delplace, Frankowicz, Hudak, and Tannhäuser 2014). University colleges organise so called 'professional bachelor programs', which are designed for learners to acquire the knowledge, skills and competencies specific to a particular occupation (e.g. nursing, social work). These vocational programs offer a direct access to the labour market and coincide to the Bologna first cycle programs (one cycle of 3 years; The Bologna Declaration [1999]). Universities on the other hand organise 'academic bachelor programs', which offer more theoretical and scientific education. They typically aim at providing access to a master program and correspond to the Bologna two-cycle programs (bachelor and master, encompassing a total of 4 or 5 years).

Generally speaking, professional and academic HE programs have distinctive learning environments. In Flemish university colleges theory and practice are combined through the use

of student-centred learning methodologies such as: simulations, working with real-life materials and long-term internships and workplace learning settings (e.g. apprenticeships, machinery to repair, assignments for translators, samples to analyse) (Camilleri et al. 2014). Group assignments, extensive practice lessons, and study trips are prevalent in professional HE programs. Learning environments in universities, then, differ from those in university colleges, as subject matter is more abstract and less practical, the pace of teaching is higher, large-scale lectures are more common, and students are expected to learn more independently (Van Rooij et al., 2018).

Research on social adjustment in academic FYHE

A myriad of international studies have explored the social aspect of the FYHE-experience from different angles, often using the concept of social integration (e.g. Braxton et al. 2013; Tinto 1975), but also adopting perspectives where constructs such as social connectedness (e.g. Jorgenson, Farrell, Fudge, and Pritchard 2018; Rovai 2002), social belonging (e.g. Hoffman et al. 2002; Hurtado and Ponjuan 2005; Thomas 2012), identity development (e.g. Blair, Cline, and Wallis 2010; Christie, Tett, Cree, Hounsell, and McCune 2008; MacFarlane 2018) and social capital (e.g. Bourdieu 1986 ; Brouwer, Jansen, Flache, and Hofman 2016) are central. An extensive overview and comparison of these existing theories is beyond the scope of this article. However, even an examination of only the aforementioned works illustrates the plethora of described first-year students' experiences that are associated with the social adjustment process, such as (anxiety about) making new friends, establishing (less) formal relationships with staff, getting to know power relations between staff and students, developing social skills through meeting new people, feeling accepted, cohesion, connectedness with old friends/new friends/diverse friends, trust, interdependence, being treated with respect, peer/family/staff/financial support, collaboration, help/advice seeking, isolation, emotional insecurity, being enthusiastic about the institution, comfort in institution/classroom environments, participating in the social practices to do with student life, joining school clubs and fine arts activities, etc.

Several *qualitative* studies in these different fields provide comprehensive and rich accounts of social experiences that students encounter during their transition. Wilcox, Winn, and Fyvie-Gauld (2005), for instance, examined this phenomenon from a social integration perspective in a sample of 34 British first-year university students enrolled in a range of academic programs, such as Criminology and Sociology. Nested in the retention literature, this study investigated the processes through which social integration influences first-year students' decisions as to

whether or not leave university. The authors shed light on different important FYHE social experiences, such as: connecting with peers and staff; making compatible friends; feeling lonely; fear about the social side of university; personal issues (e.g. coming out as gay). Although a multitude of social experiences came up, *social support* (emotional, instrumental, informational and appraisive) emerged as the most central theme of the study. By contrast, in a study by Christie et al. (2008) - which approaches the transition of 28 non-traditional students entering an elite university in the United Kingdom (UK) from the 'identity development' perspective - the centrality of *emotions* is stressed, as the authors concluded that coming to know the new learning environment is an emotional process that can incorporate both feelings of alienation and exclusion, or excitement and exhilaration.

Moreover, to date, scholars engaged in the aforementioned perspectives do not agree on how to *quantitatively* measure important facets of students' social experiences in their transition to FYHE, as we illustrate here by focussing on the social integration perspective. Indeed, together with other authors (Davidson and Wilson 2013; Tarazona and Rosenbusch 2019), we observed that different scholars consider a diversity of sub-dimensions when operationalising social integration. One important measure of social integration is a scale incorporated in the Student Adaptation to College Questionnaire (SACQ, Baker and Siryk 1984)[1]. This social adjustment scale encompasses four sub-dimensions: (1) general social adjustment, (2) interpersonal relationships, (3) nostalgia, and (4) ability to accept the social environment of the student. In contrast to the SACQ, Braxton, Milem, and Sullivan (2000), examined social integration in the context of a highly selective, private research university only in terms of peer-group relationships and out-of-class interactions with faculty. In the same line, Torenbeek, Jansen, and Hofman (2010) operationalised social integration as contact with teachers and contact with fellow students, using a sample of freshmen studying various academic programs (e.g. psychology, law) in a Dutch university. Brooman, and Darwent (2014) seem to adopt a more fine grained measurement instrument to map out the level of social integration of first-year law students in a UK university, which incorporates the following facets: 'Belonging to the university community' (5 items); 'Relationship with old friends' (5 items); 'Making new friends at university' (5 items); 'Relationship with family' (3 items); 'Relationship with staff' (4 items); 'Making relationships through clubs, societies and student union' (3 items); 'Use of internet in relationships with others' (3 items); 'Use of mobile phone in relationships with others' (3

[1] Although the SACQ is widely used and authoritative in the field, it has previously been critiqued about its lack of a strong theoretical basis (Taylor and Pastor 2007; Feldt, Graham, and Dew 2011).

items). By way of last illustration, Severiens and Wolff (2008) only consider interactions among peers when exploring social integration in three academic programs of a university in the Netherlands (i.e. law, economics and psychology). These authors do make a distinction between formal and informal social integration.

In conclusion, both quantitative and qualitative studies within and across different strands of transition literature emphasise the *prominence* of a diverse set of elements that are associated with social adjustment of FYHE students. Although these comprehensive conclusions are essential for a detailed understanding of the student experience, the extensiveness might also complicate the design process of interventions targeting social adjustment. For instance, what social experiences are essential to incorporate in a guidance trajectory?

Understanding social adjustment in professional contexts

The vast majority of studies within the aforementioned strands of research focus on academically oriented higher education contexts. Undoubtedly, there have been relatively few investigations that examined social adjustment in professionally oriented higher education programs. Nevertheless, it is clear that differences in the learning environments in professional and academic programs might impact students' social adjustment process; As was pointed out above (see 'Research context: Flemish higher education system'), students in professional HE programs typically are confronted with more student-centred and collaborative learning settings, such as long-term internships, and extensive small-group practice lessons (Camilleri et al. 2014). In this light, previous research has indeed suggested that the average tendency for faculty to use more student-centred pedagogies "*furthers students' charitable behaviours and caring orientation*" towards their peers (Mayhew, Rockenbach, Bowman, Seifert, and Wolniak, 2016; p.322). Moreover, it also is conceivable that social adjustment in professional programs might be influenced by the multitude of collaborative aspects of the learning environment, as students are required to frequently and intensively interact with peers and staff.

It should be noted here that, to some extent, North-American research has examined social adjustment in more professional FYHE contexts by examining this phenomenon in two-year (commuter) community college programs that are more 'career-oriented' (e.g. Chapman and Pascarella 1983; Deil-Amen 2011; Wild and Ebbers 2002). The qualitative work of Deil-Amen (2011), for example, generally concludes that social adjustment in community colleges - when compared to residential four-year universities - revolves more around academically-related activities (e.g. joining study group) and interactions with faculty and students inside the

classroom, and less around purely social activities outside class hours, such as attending social events (Mertes, 2015). However, this research primarily considers social adjustment through the lens of retention (i.e. 'how does social adjustment influence persistence or drop-out in FYHE?'). Furthermore, it focusses strongly on the fact that students in traditional four-year universities are commonly *residential* students, while students in community colleges typically *commute* between the HE institution and home. It is thus unclear whether the above noted discrepancy in social adjustment between the two described contexts could at all be (partially) attributed to the vocational character of community colleges.

In conclusion, a reconsideration of the social adjustment process in professional HE programs seems to be warranted. Although we acknowledge that the organisation of HE differs internationally, we believe that Flanders, with its specialised professionally oriented HE institutions ('dual' HE system; see 'Research context: Flemish HE system'), is a valuable context to further investigate students' first-year social experiences in professional HE programs.

The process-like character of social adjustment

A final observation pointed out here, is that many studies on social adjustment disregard the longitudinal character of this concept (e.g. Severiens and Wolf 2008; Torenbeek et al. 2010). However, several scholars (e.g. Christie et al. 2008; De Clercq, Roland, Brunelle, Galand, Frenay 2018; Ecclestone, Biesta, and Hughes 2010) suggest that students' adjustment to FYHE should be considered a process, wherein the importance of certain social adjustment experiences might vary throughout FYHE (Wilcox et al. 2005). Furthermore, Tinto (2012) characterises social integration from a theoretical perspective as '*a very complex, quite fluid situation that need not be experienced in the same fashion by every student*' (p.94).

This study

To date, the social adjustment process in professional FYHE contexts has received scant attention in the research literature. Taking into account the abovementioned abundance of constructs describing freshmen's social experiences derived from research only in academic HE contexts, in this study, we aim to uncover the *most important* social experiences in professional HE contexts. It is beyond the scope of this study to establish an all-inclusive definition of the social adjustment process in professional HE; rather we want to map out which social experiences are essential according to the perceptions of students themselves and are to

be considered when, for instance, designing guidance and support initiatives targeting the first-year social experience.

RQ1: *What do first-year students in a professional HE context perceive to be the most important social experiences associated with their adjustment process?*

Further, in accordance with the proposition that students' adjustment to FYHE should be considered a process (e.g. Christie et al. 2008; De Clercq et al., 2018; Ecclestone at al. 2010; Tinto 2012), the present study seeks to examine whether or not the uncovered key experiences associated with social adjustment (RQ1) are reported at different times in the first semester:

RQ2: *To what extent do the unveiled key experiences associated with social adjustment (RQ1) occur over different periods in the first semester of FYHE?*

Method

Participants and procedure

To answer our research questions, we collected qualitative data from first-year students from a Flemish university college in academic year 2017-2018. Aiming to pursue maximum variation in our data, respondents were selected based on a purposive sampling procedure (Cohen, Manion, and Morrison, 2011) which we will further delineate. In November 2017 all students from the Dutch study disciplines in this institution (*N*=3225) completed questionnaires measuring important aspects of students' adjustment, such as self-efficacy, self-concept, emotion regulation and social and academic adjustment. Subsequent, latent profile analysis (Magidson and Vermunt 2004) was carried out to explore whether we could identify distinct profiles based on the aforementioned variables. Students who indicated that they had previous experience with HE (*N*=1017) and/or did not give their informed consent (*N*=90) were not taken into account for this analysis and the remainder of the study.

We were able to discern two moderate-sized groups (high, *N*=727 and low, *N*=346) and one large middle group (*N*=1095) (see Appendix A). The low group represented students who reported particularly low levels of aspects of academic and social adjustment. The high group reported high levels of aspects of social and academic adjustment. Respondents from these two distinct profiles who indicated that they wanted to participate in follow-up research (*N*=939; High adjustment profile: *N*=642; Low adjustment profile: *N*=297), were invited by e-mail to take part in the next phase of the data collection. It was not communicated to these students on which grounds they were invited to participate (i.e. belonging to the high or low adjustment

profile). Eventually, 104 students were willing to complete a 'reflective log' at the start of the second semester of FYHE (February 2018), in which they reflected on their experiences in the first semester. The sample consisted of 15 male (14%) and 89 (86%) female students with an average age of 18.3 years. Furthermore, 23 (22%) participating students belonged to the low profile, while 81 (78%) students from the sample were part of the high profile. Fourteen different professional study disciplines were involved, such as social work and nursing (see Appendix B).

Data collection

In this study, the critical incidents technique (CIT; Butterfield, Borgen, Amundson, and Maglio 2005; Flanagan 1954) was relied on, which is defined by Flanagan as '*a set of procedures for collecting direct observations of human behaviour in such a way as to facilitate their potential usefulness in solving practical problems and developing broad psychological principles*' (p.327). This widely used qualitative research method is recognised to be an effective exploratory tool to collect self-reported experiences of important real-life events (Butterfield et al. 2005). An incident is considered 'critical' when it makes a significant contribution - positively or negatively - to a phenomenon (Flanagan 1954).

To capture the critical incidents that first-year university college students associate with their social adjustment process (RQ1), we created a paper and pencil *reflective* log (Appendix C) that respondents completed at the beginning of the second semester, reflecting on the first semester. In order to organise the data collection as standardised as possible, all respondents watched a 10 minute instruction video before completing the log. The log was accompanied by a written instruction as well. These instructions provided respondents with a basic understanding of social adjustment, without prompting them too heavily in a certain direction. Firstly, we gave a brief description of social adjustment, which was based on the definition of Baker and Siryk (1984): "*Under social adjustment we understand the way you dealt with new social experiences at the university college (e.g. meeting people, becoming a member of a group, participating in social activities, ...).*" Secondly, to further evoke meaningful reflections on the social adjustment process, we presented the respondents three pictures ('photo-elicitation technique', Cohen et al. 2011; p.530) that displayed social situations which students might encounter during their transition (Picture 1: students sitting together, talking on campus grounds; Picture 2: students dancing at party; Picture 3: students having lunch together).

Subsequently, respondents were asked to comprehensively describe three important experiences (positive or negative) with regard to their social adjustment in the first semester, and to situate these experiences on a timeline (Appendix C). This timeline, which covered the complete first semester (September 2017 to January 2018), was divided into three time frames, in each of which the student wrote down one experience. In this way, we could map out experiences over a longer period of time, with the aim of capturing the process of social adjustment. Respondents were explicitly briefed that such an experience could be positive or negative, but that it must have "impacted" them. No other restrictions were imposed on the experiences to be reported.

Six time slots were foreseen at well-chosen time-points in the second week of February (first week of the second semester), so that students from all study disciplines would have the opportunity to fill in the reflective log. Participating students had a chance to win a 100EUR coupon. Informed consent was obtained from all participants.

Analysis

The reflective logs were digitalised and imported in NVivo 11 software. With the aim of identifying key experiences in the social adjustment process (RQ1), content analysis was undertaken in order to classify the reported narratives into relevant categories/themes (Krippendorff 2004). Conform to the CIT literature, in a first step, an inductive open coding approach was used to make a first abstraction of the critical incidents (Chell, 2004; Flanagan, 1954). This abstraction relied on the commonalities between individual students' reports of critical incidents. In other words, we sought to unveil categories of key social experiences that emerged as common themes from the data. The emergent codes were developed by the first author and discussed with the second and third author to indicate needs for redefinition and for the development of additional (sub)categories. The next phase of the analysis involved the modification of the first, tentative (sub)categories, after which a second round of classification occurred.

Next, we examined the trustworthiness of the resulting main themes, by considering the level of consensus in the assignment of text segments to categories between the research team and an independent coder (Campbell, Quincy, Osserman, and Pedersen 2013). Hereto, this independent coder recoded 15% of the reflective logs (16 of 104 logs; 48 of 312 narratives) in isolation, whereafter intercoder reliability was calculated. For all themes, the coders obtained

high intercoder reliability, with Cohen's Kappa's ranging from .80 to .89 (Landis and Koch, 1977).

As described above, we set out to capture students' social adjustment across time by explicitly exploring students' experiences in three well-defined consecutive time frames in the first semester of FYHE. In order to examine whether the revealed key experiences associated with social adjustment were reported at different times in the first semester of FYHE (RQ2), we carried out a quantitative analysis of code occurrences. More specifically, we explored the extent to which respondents' references to the main themes (uncovered by the preceding content analysis) were distributed across the three discerned periods. Hereto, a frequency table was created wherein code occurrences were counted and displayed per theme per time frame, giving us a general overview of the occurrence of themes and possible theme shift during the first semester. In this way, we obtain an understanding of which of the themes are more significant at the beginning, middle or end of the first semester.

Results

Key experiences in the social adjustment process in the first semester of FYHE

After a thorough content analysis of the reflective logs, it became apparent that the respondents reported on five overarching themes of experiences that they associated with their social adjustment process. These themes – each containing several sub-themes - emerged from the commonalities between individual students' accounts, and represent key experiences that are at play in the social adjustment process of first-year students in professional HE programs: (1) *Dealing with the unknown;* (2) *Establishing a first connection;* (3) *Establishing a deeper connection;* (4) *Support from peers and others; and* (5) *Loneliness*. In what follows, these five themes and their subthemes are described. The illustrative quotes are identified by a code that refers to several respondent characteristics, as is detailed in Table 1.

Table 1. Participant characteristics and corresponding codes.

Characteristic	**Code**
Respondent number	1 - 104
Gender	F = Female; M = Male
Adjustment profile	H = High adjustment profile L = Low adjustment profile
Reference period in log	T1 = September – October T2 = End of October – Beginning of December T3 = Beginning of December - January

Dealing with the unknown (N=52)[2]

Firstly, the way students dealt with (the prospect of) entering an unknown, new environment emerged from the data as an important theme within the social adjustment process. Indeed, respondents described that, during their FYHE transition, they had to enter a new social environment: in this research context, also a city they often did not know yet, where they met a lot of new people (peers, lecturers, mentors, dorm mates, …). Respondents often mentioned that they had no idea of what to expect of HE, and a lot of them stated that they were afraid of this transition (*N*=45). First-year students especially feared that they would not be able to make certain contacts, that they would not fit in.

> *'I was immensely stressed out for the start of higher education. Because of this, I kept away from my environment and I neglected my friends'* (57,F,H,T1)

A number of these respondents (*N*=10) referred to their personality as a precursor of this fear. These students describe that they were shy or 'less social', which made it more difficult to get to know people.

> *'In the beginning of the semester I already knew some people here at the university college, but nobody from the first year. This gave me stress because I'm not super social.'* (22,F,H,T1)

On the other hand, a smaller group of students (*N*=7) described that they were looking forward to the new situation, where they could meet new people and make new friends. They seemed to cope with the unknown environment very well.

> '*I looked forward to move into a student house and going to the university college because this was the start of a new chapter in my life. I didn't know anybody here, so everybody I met was new for me. In the beginning, everything that happened outside school was exciting and special.'* (90,F,L,T1)

Establishing a first connection (N=93)

Most respondents (*N*=23) explicitly wrote down that their abovementioned fear of not fitting in appeared to be unfounded. Although we opted to report on these 23 references under

[2] This theme was reported by 52 of the 104 respondents.

'*Establishing a first connection*', they were also coded under '*Dealing with the unknown*', since respondents described these experiences as comprising a rather negative aspect regarding this latter category as well.

> *'I am very shy and was pretty scared at the first day of school. But everything went fine and I immediately had a good connection with my class.* […]*'* (31,F,H,T1)

More generally, students frequently (*N*=66) reported that making a first connection with their peers was rather straightforward for them.

> '*From the start of, I thought our class was fun and spontaneous. It was very easy to make new contacts, but at this moment we still only saw each other at school and did not yet meet up socially*.' (13,M,H,T1)

Nevertheless, there are also students (*N*=27) who indicated that they experienced difficulties in making a first connection with peers. For instance, two respondents referred to their language and culture respectively as an important barrier in meeting people or that age - being older than their peers - caused difficulties. The following citation is an example of a more general experience of a student having difficulties connecting with her peers:

> *'I am not a person that easily makes friends and in October I saw that there developed cliques in class. I had the feeling that I didn't belong and this made me very scared.'* (6,F,L,T1)

In several study disciplines participating in this study, introduction activities at the beginning of the first semester of FYHE took place. These activities were repeatedly discussed in the logs, and were often described as facilitating students' social adjustment (*N*=20). However, several other respondents (*N*=5) reported more negative experiences regarding these introduction activities.

> *'In the introduction week I didn't really get to know new people. I found the activities forced and I prefer to get to know people on my own. I also didn't really have a clique with the students with whom I ended up in a group.' (83,F,L,T1)*

It was frequently suggested by respondents (*N*=23) that it is more difficult to establish a first connection with peers in larger groups. Students stated that, when these large groups were

divided into smaller groups, it was much easier to get to know your fellow students.

> '*The first day of school was very pleasant because we had a good connection in class. We were divided into small groups, which was a good thing, in larger groups that would have been more difficult.*' (1,F,L,T1)

In the same light as the aforementioned, several curricular activities (e.g. group assignments, practice lessons, internships, school trips) were referred to as ideal moments to make a first connection (*N*=17).

> *'At the end of November, we went on a school trip to [Name City] with half of the people of our study discipline. Over there, we were divided into groups with people we did not yet know. Although it was only a three-day trip, afterwards I already knew a bunch of new people.'* (26,F,H,T2)

Establishing a deeper connection (N=77)

Respondents (*N*=55) repeatedly reported on easily establishing a deeper connection (friendship) with their fellow students. Oftentimes, but not exclusively, this experience was described to occur after a first, more surface connection with peers had been made. Students indicated that their bond was getting closer, that they could discuss personal matters, and that they participated in social activities outside the university college more often (e.g. having a dinner party, going out, engaging in a sport activity, going on a weekend or a holiday, joining a fraternity). Several respondents (*N*=14) indicated that these social activities outside of school were in fact facilitators for creating close relationships.

> *'Throughout November we had the course 'collaborating in teams'. This led to us to getting to know each other much better and also in a different way. For me, it led to finally making 'real' friends. Friendship wasn't that superficial anymore and this gave me a more social life outside class hours.'* (100,F,L,T2)

Even though most students seemed to establish this deeper connection relatively effortlessly, there are also those students (*N*=22) that described difficulties in experiencing this facet of social adjustment. For instance, students reported that they just were not able to go beyond a first, surface connection or that they initially established closer friendships, but then later

tensions arose.

> *'There is a group of girls of our class with whom I associate. Nevertheless, I feel like I'm a misfit. I get along with everybody, but I don't specifically have somebody with whom I'm close. This makes me miss my old friends and school.'* (52,F,H,T2)

Support from peers and others (N=62)

In 56 student reports, peer support emerged as another important social experience in the first semester of FYHE. Respondents often (*N*=50) described they experienced help from fellow students regarding difficulties during the exam period, school assignments, personal problems and sharing notes and summaries. Respondents frequently (*N*=12) reported that social media groups were created wherein a lot of information and material was shared.

> '*I am convinced that, shouldn't I have had Facebook or Messenger during the exam period, I wouldn't have had such good grades. The class group was a HUGE support. Everybody helped each other day and night with questions, explanations, summaries,… People who already did another study discipline or repeated a year were very helpful*.' (16,F,H,T3)

To a much lesser extent (*N*=6) students reported on the support they experienced from mentors and lecturers.

> *'I felt a lot of support from lecturers. Many lecturers felt for us, and the last few classes they did everything to explain the course content.'* (7,F,H,T2)

Six students described rather negative (quite diverse) experiences they encountered regarding perceived support, as is exemplified by the next quote from a student that did not dare to ask her peers for help:

> *'The exam period makes that you have less social contact. I found it difficult to be alone for a longer period of time. Also, I didn't dare to ask a question in a Facebook group with students of the complete year. I don't know them well enough for that.'* (15,F,H,T3)

Loneliness (N=28)

A last important theme that was touched upon by the respondents was loneliness experienced throughout the first semester. Students mostly described loneliness in the context of the exams, at the end of the first semester (*N*=16). Students experienced this period of time as a phase wherein they had little social contact. Online contact with their peers made this period somewhat more bearable.

> *'During the exam period you can't do a lot except studying. I did talk to my friends a lot over Messenger, but I still felt lonely.'* (25,F,H,T3)

On the other hand there were also students (*N*=12) who described feelings of loneliness because they could not establish social connections at the university college.

> '*I found the first week at the university college horrible. It was my first week in the dorm, which already made me feel lonely. I knew nobody here, and also wasn't familiar with the city. After the first day I had the feeling that everybody had made a connection with someone, while I absolutely didn't. Especially when I sat alone during that first break, I felt really lonely.*' (100,F,L,T1)

Occurrence of key social experiences over time

Taking into consideration the process-like character of social adjustment, we also explored the occurrence of the abovementioned five key facets of social adjustment over time (RQ2). Hereto, we examined how the references regarding different themes of experiences associated with social adjustment are distributed across the different periods discerned in the reflective logs. The results of this distribution are set out in Table 2. First of all, the table shows that a total of 397 references were counted in the logs. Indeed, several reported experiences were coded under multiple categories. For instance, as mentioned above, 23 respondents described at period 1 (September - October) that they initially were very anxious about not fitting in, but later experienced that making a first connection with their peers was much easier than expected. These 23 references were thus coded under '*Dealing with the unknown*' as well as under '*First connection*'.

Table 2. References per theme per time frame.

Theme	**Period 1**	**Period 2**	**Period 3**	***Total***
Dealing with the unknown	**51**	1	2	*54*
First connection	**88**	26	13	*127*
Deeper connection	14	**58**	32	*104*
Support from peers and others	7	21	**51**	*79*
Loneliness	7	6	**20**	*33*
Total	*167*	*112*	*118*	*397*

Note: bold font marks the highest reference count for every theme across time frames.

Closer inspection of Table 2 shows that references are not evenly distributed across the three periods. '*Dealing with the unknown*' and '*First connection*' were clearly reported as experiences occurring more in period 1, while '*Deeper connection*' was described mainly in period 2 (End of October – Beginning of December). It is, however, interesting to note that '*First connection'* was referred to 26 times in period 2, and 13 times in period 3 as well. Likewise, we observe that 14 respondents already reported on '*Deeper connection*' in period 1, while 32 students referred to this theme only in period 3 (Beginning of December – January). Next, the '*Support*'-relationships that students experienced, already seemed to become a key facet of social adjustment in period 2, but was especially important in period 3, when students prepared for and took their exams. Finally, the theme of '*Loneliness*' was reported mainly in period 3 as well. Nevertheless, Table 2 shows that almost half of the references on this theme were counted under periods 1 and 2. In sum, the importance of the themes shifts during the first semester. However, themes are not exclusive to a certain period.

Discussion

Although the social aspect of the FYHE-experience is well-documented in HE literature, this body of research is predominantly carried out in academically oriented programs. Much less is known about the social adjustment process in professionally oriented programs. Moreover, the existing quantitative and qualitative literature on this topic remains inconclusive on which sub-dimensions of the social adjustment process are most important according to students themselves. Therefore, the main goal of the current study was to identify the key social experiences in the social adjustment process in the first semester of FYHE, as perceived by university college students. Our findings, based on 104 reflective logs that were completed by purposively selected students from 14 different study disciplines, indicate that we can discern

five crucial 'experience-themes' that the social adjustment process in a professionally-oriented context encompasses.

Firstly, before as well as during the transition to HE, students had to *deal with (the prospect of) entering an unknown, new environment*. The majority of first-year students seemed to be afraid they would not be able to make contact with peers. This finding is in line with other research findings in FYHE academic contexts. Thomas (2012), for instance, reported that '*the majority of students (70%, n=262) felt confident that they had the ability to succeed in their chosen area of study, but most (75%, n=281) were worried about making friends when they started at university*' (p.25). This was also supported by qualitative evidence. Wilcox et al. (2005), then, found in their interview study that the majority of informants expressed intense anxiety about belonging and identifying with others in FYHE. Denovan and Macaskill (2013) also corroborate this idea as they observed that freshmen experience the development of a new social network as stressful.

Next, the degree to which students were able to *establish a first (surface) connection* with their peers emerged as a second important theme within the social adjustment process. For most respondents, this connection came rather effortlessly. The aforementioned fear of not belonging, in most cases, seemed to be unnecessary, which resonates with the findings of Wilcox and colleagues (2005) who reported that, as students make contacts at university and develop friendships, initial feelings of anxiety and loneliness are overcome by most students. Next, similar to previous research in (commuter) HE institutions (e.g. Townsend and Wilson 2009), we found evidence that several elements, organised at institutional level, might expedite bonding between peers: (1) participating in introduction activities; (2) working/residing in small groups, rather than large groups; (3) engage in various curricular activities, such as group assignments. Our results further confirm the previous findings by Pokorny, Holley, and Kane (2017) and Read, Archer, and Leathwood (2003) that difficulties in establishing a first connection might, for instance, be a result of disparate culture, language, or age. Indeed, we found qualitative evidence that students' social adjustment process might be hampered by having a different cultural background from their peers, having a diminished knowledge of the working language, or being older than then their peers.

In most cases, this first connection with peers developed rather naturally to a *deeper connection and friendship*, which was perceived by first-year university college students as a third important social experience associated with their transition process. This finding parallels with those found in previous studies. For instance, Wilcox et al. (2005) reported that '*over time it*

becomes imperative [for first-year students] to make 'good' friends, whom students describe as their 'new family'" (p.213). Hereby, social activities (outside university college) appeared to be important facilitators for creating close relationships (e.g. Braxton et al. 2013). The literature review showed that establishing a peer connection (both surface and deep) is often taken into account when measuring social integration (e.g. Braxton et al., 2000; Rienties et al. 2012; Severiens and Wolf 2008; Tinto 1975; Torenbeek et al. 2010). However, in contrast with the operationalisations by Braxton et al. (2000) and Torenbeek, et al. (2010), interaction with faculty does not emerge from our data as a key experience in the social adjustment process. This seems to corroborate the statement of Tinto (2012) that interaction with faculty is part of the academic system of a HE institution rather than its social system.

Consistent with the existing literature carried out in academically oriented contexts (e.g. Brouwer et al 2016; Rovai 2002), we found that *feeling supported by (in particular) peers* is a fourth very important social experience for first-year students. For instance, Hoffman et al. (2002) identified perceived peer support as one of three main categories of factors related to a sense of belonging. Also, the Wilcox et al. (2005) study found that making and maintaining social support with peers and (to a lesser extent) staff, emerged as one of the most significant themes in students' social integration process.

Finally, a fifth identified emergent theme of social adjustment deals with *loneliness*. This category of critical incidents is the smallest category, but nonetheless deemed to be significant for first-year university college students. This should not be surprising, since we know that every human being has an essential desire to be connected to other people, especially in adolescence. When this basic need is hampered, individuals feel lonely (Goossens, 2018). Several works in transition literature indeed refer to first-year students experiencing feelings of isolation or loneliness (e.g. Tinto 2012; Read et al. 2003; Wilcox et al. 2005). Nevertheless, these researchers mostly found evidence of feelings of loneliness as a result of students not being able to establish social connectedness at the university, while in our study respondents also described loneliness in the context of the exams, at the end of the first semester, even when they had been able to establish a deeper connection. Although loneliness appears to be a significant experience associated with the first-year transition process in our study, it seems that this construct is often not investigated when researchers operationalise freshmen's social adjustment (e.g. Severiens and Wolf 2008; Torenbeek et al. 2010).

Hence, in general, the abovementioned five themes of social experiences resonate with the findings of studies in academic settings, which suggests that similar key social constructs are at

play in both HE contexts. However, making a clear-cut comparison of the perceived significance of the themes and sub-themes, relative to what was reported by students in studies carried out in academic contexts, is more challenging due to the differences in study designs and reporting (quantified vs non-quantified qualitative data). In this light, for instance, Deil-Amen (2011) concluded that social integration in North-American, career-oriented community colleges revolves *more* around academically-related activities, and *less* around purely social activities outside class hours, when compared to more academically oriented, residential, four-year universities. On the one hand, similarly to the work of Deil-Amen (2011), our results indicate the significance of academically-related activities for Flemish university college students, as various respondents specifically report on the importance of curricular activities when connecting to peers, and the importance of peer support when confronted with academic challenges. On the other hand, in our study, multiple respondents also report on the importance of purely social activities (e.g. having a dinner party or engaging in a sport activity), which seems to deviate from the conclusion of Deil-Amen (2011). Future research should further focus on contrasting both professional and academic HE contexts to provide a more fine-grained view on the similarities and differences in social adjustment, by using designs specifically developed for this purpose. For example, the simultaneous use of our reflective logs in large samples of students in both academic and professional programs, and subsequent (quantitative) comparison of the data between these two groups, could shed more light on this matter.

With respect to the second research question, this study indicated that the five unveiled themes of 'social adjustment experiences' are not referred to consistently at the three periods distinguished in the reflective logs. Although every theme was mentioned in every period, references are not evenly distributed across the three periods, suggesting that different themes of social adjustment are more significant at different times in the semester (e.g. Wilcox et al. 2005). The aforementioned results advocate that the social adjustment process might be experienced in different ways by students and does not occur easily for every student, which strongly corroborates the theoretical proposition of Tinto (2012) that social integration is a complex and fluid situation that need not be experienced in the same fashion by every student.

Regarding limitations, it should be noted that our sample dealt with an underrepresentation of male students and students from the low adjustment profile. Based upon their relative proportions in the freshmen population, we would expect that approximately 35% of the participants would be male and around 32% would originate from the low profile, while in fact these proportions were only 14% and 22%, respectively.

A second limitation concerns the fact that the narratives in this study strongly focus on social experiences of individuals *within* the institutional environment. This could be an artefact of our method of data gathering that might rather have elicited these specific kind of experiences from our participants. However, Christie and Dinham (1991) and Tinto (2012) state that students' external environment (e.g. family support, high school friends) can also have an important influence on their social adjustment process. Future research on key experiences associated with the social adjustment process should therefore also explicitly take into account students' experiences within the *external* environment, in order to get a deeper understanding of the specific role this external context of the institution takes up in the first semester of FYHE.

Thirdly, this study was limited to the use of retrospective self-report data that were collected after the first semester. Nevertheless, Chell (2004) states that one important advantage of adopting the critical incidents technique is that, even if collected accounts are retrospective in nature, respondents usually have good recall of these events since they are 'critical'. Future research on this matter, however, could adopt a more online approach, where students are tracked at different moments throughout the first semester.

Finally, it could be argued that our study only considered a specific time period of the social adjustment process. Indeed, although many scholars agree that first-year students are confronted with challenges regarding their transition *especially* in the first semester of FYHE (e.g. Bowman, Jang, Jarratt, & Bono 2019; Clinciu 2013; Martens & Metzger 2017), it is generally acknowledged that first-year students' adjustment is an ongoing process of adaptation, that also continues after the first semester (e.g. Coertjens, Brahm, Trautwein, & Lindblom-Ylänne 2017; Gale and Parker 2014). For future research, it thus seems worthwhile to also consider social adjustment in professional contexts during the second semester and into subsequent years.

Conclusion

The present study has two main findings; Firstly, it has identified five key themes of social experiences associated with the adjustment process that freshmen perceived to be critical in the first semester of professional FYHE (Dealing with the unknown, Establishing a first connection, Establishing a deeper connection, Support from peers and others, and Loneliness). Secondly, it has shown that these specific themes of social experiences seem to be more significant at different times in the first semester of FYHE.

We believe that fostering students' social adjustment in FYHE contexts is imperative, as it has been established that connecting with others and developing a sense of belonging are, for instance, key aspects of individuals' psychological well-being. A multitude of theoretical models have indeed highlighted that establishing positive relationships with others is a main influence on, or indicator of psychological well-being (e.g. Aked and Thompson 2011; Bowman 2010; Kern, Waters, Adler, & White 2015; Newman 2005). Although additional research is needed, we believe that the five key themes of social experiences identified in the present study are helpful for professionally oriented HE programs that develop their own instruments for the identification of at-risk students early in their academic career, or design guidance and support initiatives that intent to facilitate freshmen's social adjustment process. We would recommend that HE administrators minimally consider the abovementioned five key themes of social experiences when (1) planning to map out the social adjustment of their freshmen population, or (2) choosing specific first-year students' challenges regarding social adjustment that support initiatives can focus on. Moreover, when this development and designing takes place, administrators should also take into consideration the occurrence of the key experiences over time. For instance, a guidance trajectory encompassing the whole first semester, could start of by helping students cope with their new social environment, focussing on establishing first connections, while the theme of peer support relationships could be dealt with in the second half of the first semester before examinations take place.

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Appendix A

In order to be able to purposively select respondents with different characteristics (see procedure and participants), a latent profile analysis was conducted based upon the means of five important quantitative measures of adjustment in FYHE: *academic self-efficacy* (Item example: 'I think that I am good at studying'; α=.83), *academic self-concept* ('I think I can handle this study programme'; α=.80), *emotion regulation* ('When I'm upset, I have difficulty getting work done'; α=.87), *social adjustment* ('I am meeting as many people, and making as many friends as I would like at my university college'; α=.82) and *academic adjustment* ('I have been keeping up to date on my academic work'; α=.84). Hereto, latent profile analysis (latent variable mixture analysis with continuous cluster indicators) in Mplus 7.4 was used (Muthén and Muthén, 2012). In accordance with the study of Fryer (2017), five fit indices were employed in deciding the best solution for the number of profiles: Akaike's Information Criterion or AIC (Akaike 1987), Bayesian Information Criterion (BIC; Schwartz 1978), sample-size adjusted BIC (Sclove 1987), Lo-Mendell-Rubin likelihood ratio test (Lo, Mendell, and Rubin 2001) and Vuong-Lo-Mendell-Rubin likelihood ratio test (Vuong 1989). Lower values of the first three indices are indicators of better model fit. The latter two indices provide a test of whether a model significantly improves after the addition of one more profile; a non-significant p-value then rejects the k − 1 profile model in favour of the k profile model (Asparouhov and Muthén 2012). In addition to these fit indices, we also considered an entropy criterion to estimate the optimal number of profiles arising from our mixture models. An entropy value closer to 1 represents a better classification of a sample into subgroups (see Celeux and Soromenho 1996 for more information). The fit indices and entropy levels for the latent profile analyses are presented in Table 3. Furthermore, the relative size of the classes and their theoretical meaningfulness were also taken into account when determining the resulting number of profiles. Finally, after the best solution had been determined, ANOVA's were carried out to evaluate the variance explained by the resulting profiles for each variable (Fryer 2017).

Table 3. Overview of fit indices for latent profile analyses.

Profile	BIC	Δ BIC	BIC adjusted	Δ BIC adjusted	AIC	Δ AIC	Entropy	Vuong-Lo-Mendell-Rubin	Lo-Mendell-Rubin
1 profile	23947.14		23915.37		23890.33				
2 profiles	22243.14	1704.00	22192.31	1723.06	22152.24	1738.09	0.73	<0.001	<0.001
3 profiles	21838.20	404.94	21768.30	424.00	21713.21	439.03	0.71	<0.001	<0.001
4 profiles	21765.02	73.18	21676.06	92.25	21605.93	107.27	0.68	0.18	0.18
5 profiles	21655.72	109.30	21547.70	128.36	21462.55	143.38	0.75	0.02	0.02
6 profiles	21591.47	64.26	21464.38	83.32	21364.20	98.35	0.72	0.15	0.15

Following the procedure adopted by Fryer (2017) and Nylund-Gibson, Grimm, Quirk, and Furlong (2014), we firstly looked at the last relatively large decrease in the BIC value ('the elbow') in Table 3, as a guide in selecting the best fitting model among those considered. This guide would support a three-group solution, which is further corroborated by the Lo-Mendell-Rubin test and the Vuong-Lo-Mendell-Rubin test that both indicate that adding a fourth group to the model does not significantly improve the model. Moreover, in the four-profile solution, the entropy level drops to .68. Applying the 'elbow'-principle to the AIC and adjusted BIC, then, further suggests to favour the three-group model.

The three-profile solution is theoretically sound as well. It exists of two moderate-sized groups (high, N=727 and low, N=346) and one large middle group (N=1095). The low group represented students who reported particularly low experiences regarding the abovementioned aspects of adjustment in FYHE; the high group reported high levels on these measures; the middle group is located in between those two profiles. ANOVA's and subsequent post-hoc analyses show that all three profiles significantly differ from each other regarding the modelled variables (Table 4). Finally, Table 4 also shows that the three latent groups explain an acceptable to substantial amount of variance (R^2) in each of the five indicators.

Table 4. ANOVA results and explained variance.

	Low group mean	Mid group mean	High group mean	*p*	*F*	R^2
Self-efficacy	1.97	3.00	3.76	<0.001	2241.69	.672
Self-concept	2.62	3.23	3.85	<0.001	1181.32	.519
Emotion regulation	2.77	3.19	3.60	<0.001	110.82	.093
Social adjustment	3.42	3.81	4.12	<0.001	126.84	.104
Academic adjustment	2.38	3.02	3.81	<0.001	1017.26	.486

Note: Post-hoc analyses show that all within row means are significantly different from each other

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Appendix B

Table 5. Participating students per study discipline.

Study disciplines	***N***
Social work	18
International business management	13
Nursing	11
Communication management	9
Secondary education	7
Primary education	7
International office management	7
Occupational therapy	7
Midwifery	6
Podiatry	5
Journalism	5
Graphical and digital media	4
Early childhood education	3
Speech language therapy and audiology	2

Appendix C

Figure 1. Reflective log.

SOCIAL ADJUSTMENT

The way you dealt with new social experiences in the first semester at the university college (e.g. meeting people, become a member of a group, participate in social activities, …).

Start academic year — *End 1e semester*

	Experience 1	Experience 2	Experience 3
Timeline	*September* — *October*	*November*	*December* — *January*
Description Experience			