Field trips, friendships and societies: Exploring student engagement in the School of Earth and Environment, University of Leeds

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Abstract

Student engagement in Higher Education is increasingly seen as having a critical influence on achievement and overall university experience. However, in-depth studies of small student populations that explore the dynamics of the construct, and diversity of student experiences are currently lacking, and survey instruments remain the predominant method for evaluation. This paper addresses this gap by exploring student perspectives of the factors impacting student engagement in the School of Earth and Environment (SEE), University of Leeds. Student focus groups were held across six degree programmes and four years of study, and data were analysed using Kahu's (2013) conceptual framework. The framework comprises the state of being engaged as well as its antecedents and consequences and our findings emphasise prominent feedback loops between and within these. Building relationships between students, and between students and staff in SEE is key to ensuring these feedback loops are positive. Enablers of building relationships are identified as field trips, friendships and societies, which interact dynamically with *inter alia* increased sense of belonging and community. These, in turn, lead to higher levels of motivation, greater confidence, deeper learning, increased development of positive relationships, and further engagement. Future student engagement initiatives should therefore seek to nurture and develop community to promote positive engagement feedback loops.

Keywords

Enablers, motivation, sense of belonging, confidence, community

Introduction

Student engagement in Higher Education (HE) is increasingly seen as having a critical influence on achievement and overall university experience and has been linked with improved academic outcomes as well as broader benefits to students and HE institutions such as critical thinking, self-esteem, satisfaction and wellbeing and retention (see e.g. Kuh, 2009; Pascarella, Seifert, & Blaich, 2010; Trowler & Trowler, 2010). However, evaluation of such a complex construct is difficult and has to date largely been carried out using survey instruments such as the National Survey of Student Engagement (NSSE, 2010). These surveys predominantly focus on student behaviour and have been questioned, not least, for overlooking the complexity and dynamic nature of student engagement (Kahu, Stephens, Leach, & Zepke, 2015). With the recognition that there is still much to learn about student engagement, authors call for rich, in-depth case studies of student populations to capture the diversity of how students experience engagement, to further our understanding of the concept, to enable the development of relevant interventions and to maximise the potential

benefits of engagement (Fredricks, Blumenfeld, & Paris, 2004; Kahu, 2013). This research complements current initiatives such as the What Works programme (Thomas, Hill, Mahony, & Chambers, 2017) by contributing empirical data to these areas by exploring the dynamics of student engagement in the School of Earth and Environment (SEE). Kahu's (2013) conceptual framework of engagement, influences and consequences is used as a basis for analysis.

Student engagement

Kahu (2013) describes the literature on understanding student engagement as comprising four distinct but overlapping perspectives: behavioural, psychological, socio-cultural and holistic. She analyses the strengths, weaknesses and key tenets of each before proposing an overarching conceptual framework to inform future research (see Figure 1). The framework comprises: the *Structural* and *Psychosocial* influences of engagement, *Student Engagement* as a state of being, the *Proximal* and *Distal* consequences of engagement and the *Sociocultural* context that these are embedded within. The framework seeks to overcome some of the weaknesses of the four perspectives by, for example, explicitly acknowledging that the state of being engaged as a student is dynamic and is embedded within a broader *Sociocultural* context, and by recognising that engagement is influenced by different factors, and engagement results in varying consequences. In addition, the framework highlights the interaction between the influences, state of being engaged and consequences, and the potential for feedback within and across them.
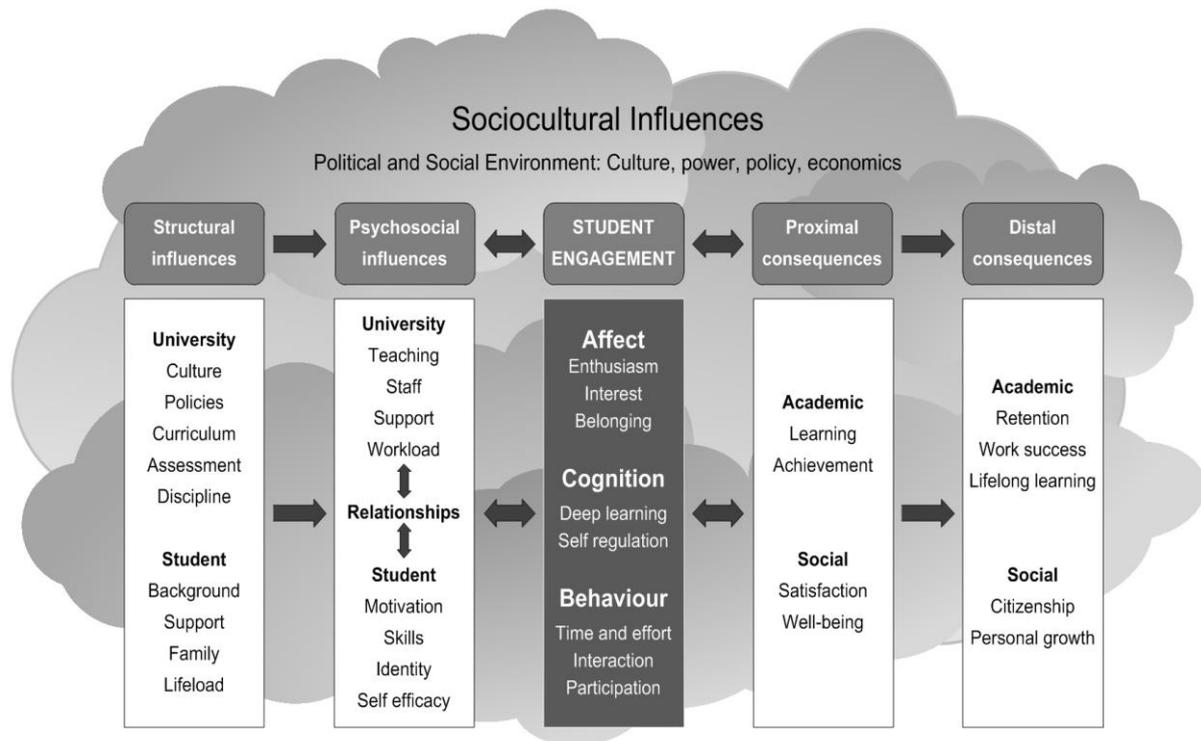

Figure 1 - Kahu's (2013) conceptual framework of engagement, influences and consequences

The state of being engaged

The definition of student engagement is still widely debated in the literature but researchers agree that being engaged includes an investment of time and effort on the part of the student, and participation in learning (Coates, 2007; Hu & Kuh, 2002; Kuh, 2009). In describing the state of being engaged, Kahu's (2013) framework employs the three dimensions of Fredericks et al., (2004): 1) Behavioural engagement, including positive conduct, involvement in learning and academic tasks and participation in course-related activities, 2) emotional or affective engagement encompassing attitude and belonging and, 3) cognitive engagement which emphasises investment in learning. In doing so the framework integrates the psychological perspective and acknowledges that engagement is more than just a set of behaviours but involves emotional aspects, is dynamic and is impacted by external factors which can enable, or form barriers to, engagement.

Influences on engagement

Kahu's (2013) framework includes *Structural* and *Psychosocial* influences at the university and student levels, as well as relationship between and within the students and the university, as potential influences on students being engaged. It therefore incorporates many enablers and barriers cited within a growing body of literature around influences on student engagement, much of which developed from Chickering and Gamson's (1987) seven principles for good practice in undergraduate education. For example, at the university level, factors impacting engagement include organisational culture (van der Velden, 2012), the availability of resources and engagement opportunities (Coates, 2005; Strange & Banning, 2001), curriculum design (Kuh, Kinzie, Buckley, Bridges, & Hayek, 2011) and teaching delivery (Umbach & Wawrzynski, 2005). In addition, the interaction between the university and its students is central, with effective relationships between students and staff, and between students and peers, including friendships (Bryson & Hand, 2007; Pascarella, Terenzini, & Feldman, 2005; Smith, 2007), as well as a sense of belonging and value within a learning community (Zhao & Kuh, 2004) cited as key. At the student level, motivation, a willingness to be challenged and self-regulation are highlighted as important in enabling engagement (Coates, 2007; Fazey & Fazey, 2001; Kuh, 2003; Yorke & Knight, 2004), whilst financial and social pressures such as the need for employment, caring duties and health issues (which Kahu (2013) includes in 'lifeload') can act as barriers to engagement (Yorke, 2000).

Consequences of engagement

As with the influences on student engagement, the literature reveals a myriad of outcomes for students and institutions when engagement is successful. For example, engagement has been linked to students' skills development and learning (Coates, 2005; Pascarella et al., 2010), personal growth (Mercer, 2007), and active citizenship (Zepke, Leach, & Butler, 2010) as well as institutional gains of improved retention (Kuh, 2009) and reputation (Coates, 2005). Kahu (2013) further categorises these between *Proximal* and *Distal*, academic and social consequences.

Sociocultural influences

The broader *Sociocultural* environment in which the student and university are embedded is highlighted as impacting on all elements of engagement (Kahu, 2013). Part of this broader environment is the context in which the student is studying. This research uses SEE at the University of Leeds as a case study and contributes to SEE's ongoing exploration of engagement.

The School of Earth and Environment, University of Leeds

SEE offers six undergraduate degree programmes, as well as Integrated Masters, Year Abroad and Year in Industry, four-year pathways to over 600 undergraduate students:

- BSc Geological Sciences (GS)
- BSc Geophysical Sciences (GP)
- BSc Environmental Science (ES)
- BSc Meteorology and Climate Science (MCS)
- BSc Sustainability and Environmental Management (SEM)
- BA Environment and Business (EB)

In light of the diversity of these programmes, which span earth and environmental science, sustainability, environmental management, and business, student engagement initiatives are focused on bringing together students from distinct disciplinary backgrounds using educationally purposeful co-curricular activities. These activities are situated within the SEE 'Student Experience Framework', developed through a student-staff partnership, which has brought about strategic change and investment in the student experience within the School. Projects so far have included: creating resources for pre-entry and induction stage students to aid transitioning from high school to university; establishing a 'Student Experience Fund' to support projects which encourage collaboration and community building; employing 'Student Engagement Ambassadors' who work closely with the 'Student Experience Officer' to help identify and facilitate engagement activities; and a weekly email event listing outlining research seminars and other discipline-related events that students are encouraged to attend.

As such, SEE provides an interesting case study to contribute rich empirical data from the students' perspective, to debates around student engagement and to explore the dynamics through Kahu's (2013) framework.

Research design and methods

Focus groups were held with students in each of SEE's six degree programmes, including the Integrated Masters, Year in Industry and Year Abroad pathways, and across the four years of study to allow comparison between them. A pilot focus group was held with 'Course Representatives', those students who were acting as a link between the students and staff within SEE, to trial the methodology. Further focus group participants were recruited through a short summary of the research in core programme lectures and a follow up email asking them to get in contact with the researcher if they were interested in participating. Students' willingness to participate in the research varied across programmes and years leading to focus groups being mixtures of students from across years on the same programme or in the same year

but on different programmes (see Table 1 for summary of focus group participants). This allowed for discussions between students in different years and about different experiences in different cohorts.

Focus groups lasted between 30 minutes and one hour, and were structured around three questions to cover each aspect of Kahu's (2013) framework (the state of being engaged, influences and consequences). For the first question, students were asked to draw on their own experiences, and to think of other students they knew, to generate words and phrases related to 'being an engaged student'. This was repeated with students being asked to generate words and phrases around the 'barriers and enablers to engagement' (influences) and the 'benefits of being engaged' (consequences). For each of the three questions, students were asked to write on post-it notes words or phrases they felt were relevant to the question. These responses were collected and clustered into themes by the researcher, and then these themes were used to structure a discussion amongst the group, which was recorded. This resulted in two forms of data for each focus group, the post-it note data and the discussion accompanying them.

Table 1 - Summary of focus group participants by programme, year of study and gender.

Focus Group	Programme(s) and *(acronym)*	Year(s) of Study	Gender
Pilot focus group with Course Representatives	BSc Meteorology and Climate Science *(MCS)* BA Environment and Business *(EB)* BSc Sustainability and Environmental Management *(SEM)* BSc Environmental Science (Year in Industry) *(ESInd)* MGeological Sciences (Integrated Masters) *(MGS)*	3 x 2nd years 2 x 4th years	3 M 2 F
1	BSc Sustainability and Environmental Management *(SEM)*	1st year	1 M 3 F
2	BSc Environmental Science *(ES)* MEnv Environmental Science (Integrated Masters) *(MES)* BSc Environmental Science (Year in Industry) *(ESInd)*	1st year	3 F
3	BA Environment and Business *(EB)*	1st and 2nd year	2 M 1 F
4	BSc Geological Sciences *(GS)*	2nd and 3rd year	3 M

	BSc Geophysical Sciences *(GP)*		
5	BSc Sustainability and Environmental Management *(SEM)*	3rd year	2 M 2 F
6	BSc Meteorology and Climate Science (Year in Industry) *(MCSInd)* BSc Sustainability and Environmental Management (Year in Industry) *(SEMInd)* Bsc Environmental Science (Year in Industry) *(ESInd)* MEnv Environmental Science (Integrated Masters) *(MES)*	4th year	3 M 4 F

Analysis

Post-it note responses were analysed in order to assess student perspectives on the three questions around 'being engaged', 'enablers and barriers to engagement' and 'benefits of being engaged'. The data were entered into excel and colour coded under the headings of Kahu's (2013) framework (*Structural* and *Psychosocial* influences of engagement, *Student Engagement* as a state of being, the *Proximal* and *Distal* consequences of engagement and the *Sociocultural* context). The accompanying focus group discussions were transcribed and analysed for content using NVivo. The headings of Kahu's (2013) framework were used to start coding the data and further codes developed as interactions and relationships between the data emerged. Relevant quotes were extracted to support the emerging themes. Participants were assigned a code comprising their programme and year of study and order of speaking in order to maintain anonymity. For example, the first student to speak in the SEM, 1st year focus group was assigned the code SEM1A. The following sections present the results of the post-it note analysis around each of the three questions and then the accompanying focus group discussions around the emerging themes.

Results

Question one: What characterises an engaged student?

In terms of what characteristics an engaged student displays, post-it responses related to behaviour were the most numerous in each focus group apart from one (1st year ES students where most responses fell under the affect category). Behaviours were divided into five categories from course-related behaviours through to behaviours exhibited externally to the university. Each show commitment to investing time and effort, as well as demonstrating participation and interaction but with differing foci:

1. Course-related behaviours exhibited during contact hours such as good attendance, asking and answering questions in lectures and contributing to seminar discussions

2. Course-related behaviours exhibited outside of contact hours such as further reading, discussing course material with friends, attending co-curricular

activities such as course-related seminars and course-related societies and applying for research placement opportunities

3. Behaviours exhibited outside the course but still within SEE such as applying for Course Representative, School Representative and/or Ambassador opportunities

4. Behaviours exhibited outside SEE but still within University such as extra-curricular societies (those mentioned were as diverse as rugby, debating, LGBT, and ballroom dancing), paid and volunteering opportunities

5. Behaviours exhibited outside the University such as having a job and taking up volunteering opportunities within the community

All focus groups recorded behavioural characteristics in a range of the 5 categories apart from 3rd Year ES and SEM students whose responses focused around course-related behaviours highlighting a concentration of effort on studies at this stage of their course rather than broader engagement outside the course. The Course Representatives had a notable bias toward behaviours relating to 'inputting,' 'feeding back' and 'contributing' at the course, School and University level reflecting the interests that either led them to these positions or interests developed as a result of their roles. Fourth year students gave the greatest range of behavioural characteristics, which perhaps highlights their different course backgrounds and having exposure to a wider range of opportunities throughout their degree.

Responses related to emotional characteristics were also present in each focus group largely centred around having an interest in the subject and being enthusiastic and feeling 'part of something'. Relationships and friendships with both other students and relationships with staff were also common responses. Many responses to this question also included personal characteristics that engaged students were perceived to display such as being organised, punctual, independent and hard-working. These align with the cognition elements of Kahu's (2013) framework.

Question 2: What are the barriers and enablers to engagement?

All four categories of barriers and enablers from Kahu's (2013) framework were represented in responses to this question as summarised in Table 2. The majority of responses fitted under the heading of *Psychosocial* and related to the student. For example, 13 of the total 82 responses for this question related in some way to shyness and/or being scared to try new things (as barriers to engagement), or confidence (as an enabler). Other common responses in this category were around interest in the subject, attitude to work and learning, and motivations for studying. First year students highlighted the social stigma associated with engaging, particularly in a new cohort where identities and group dynamics were developing, and all groups highlighted the positive impact of having friendships on engagement. *Psychosocial* Influences related to the University were emphasised as staff who are approachable and, in particular, who know student names, as well as inspiring lecturers. *Structural* Influences related to the University were also common in responses with societies, co-curricular roles and communication of these various opportunities being cited as important. Structural Influences related to the student revealed the greatest variety of responses highlighting the myriad of individual factors that impact engagement.

Table 2 - Common responses for 'what are the barriers and enablers to student engagement?'

Structural influences	Psychosocial influences
University	**University**
Culture • Societies (Co and extra-curricular) • Opportunities (e.g. UGRLS/Ambassadors) • Scholarships (funded opportunities) • Communication (e.g. The Bulletin) • Active research community (e.g. seminars) *Curriculum* • Field trips • Year in Industry • Year Abroad	*Teaching* • Inspiring *Staff* • Approachable • Know your name *Support* • Personal tutors as people to go to
	Relationships • Friendships • Getting to know lecturers
Student	**Student**
Background • Previous teachers • Mature students • Foundation year • International student *Support* • Financial • Emotional *Family* • Enthusiasm for subject • Support (financial and emotional) *'Lifeload'* • Commuting/living at home • Health • Mitigating circumstances	*Motivation* • Attitude • Interest in subject *Identity* • Cohort character • Social stigma *Self-efficacy* • Confidence

Question 3: What are the benefits of being engaged?

All four categories of the benefits of being engaged from Kahu's (2013) framework were, again, represented in students' responses to this question as summarised in Table 3. Knowledge and skills were the most frequently represented across all focus groups and made up 22 of 92 responses for the question. However, only one respondent across all the focus groups mentioned better marks as a benefit of being engaged suggesting students are not linking engagement activities with academic *achievement* and are not motivated to engage by the potential for higher grades. Satisfaction and wellbeing were also seen as important consequences of engagement across all years. In 3rd and 4th year students, distal academic factors came through strongly with many linking engagement with an improved CV, better employment opportunities and greater networks suggesting a stronger future focus as students move through their degree. Under both *Proximal* and *Distal* social consequences, there are overlaps with the previous two questions. Enablers of engagement overlap with friendships, confidence and motivations, whilst definitions of an engaged student overlap with feeling part of something. This begins to highlight the feedback loops and interactions between different elements apparent in student engagement.

Table 3 - Common responses for 'what are the benefits of being an engaged student'.

Proximal consequences	Distal consequences
Academic	**Academic**
Learning • Skills e.g. communication, academic, independence, critical, analytical, team working • Knowledge • Holistic learning • Relating studies to the 'real world' *Achievement* • Better marks (only one respondent in all FGs)	*Work success* • Improved CV • Increased employment prospects • Networking opportunities *Lifelong Learning* • Experience • Skills e.g. communication, academic, independence, critical, analytical, team working
Social	**Social**
Satisfaction • Making the most of time at University • Feeling part of something *Wellbeing* • Confidence • Friendships • Contentment	*Citizenship* • Ability to create change • Life purpose *Personal growth* • Deeper friendships • Confidence • Self-improvement • Knowing what you want out of life

Exploring interactions and dynamics between engagement, its influences and consequences

While categorising post-it responses under the various framework headings helped in ascertaining student perceptions of the different elements of engagement, focus group discussions around the responses revealed the overlaps, interactions and feedback loops between and within them. Interactions between staff-student and student-student relationships and friendships, feeling part of something, community, confidence and being engaged came through very strongly in discussions. These dynamics are explored here through the lenses of friendships, societies and field trips which highlight these various interactions.

Friendships

Friendships with other students on the course, within SEE and at university more broadly were a key element highlighted in responses for describing an 'engaged student'. However, discussions around this topic revealed that friendships were also a critical part of *enabling* students to engage and, in turn, a *consequence* of engagement. They are therefore critical in promoting positive feedback loops within and between the different headings of Kahu's (2013) framework. Figure 2 summarises the interactions of these various elements of engagement and they are further described below.

Friendships sit under the *Psychosocial* influences of Kahu's (2013) framework and, as suggested, can directly impact on the state of being engaged in a number of ways. Perhaps most simply, friendships reportedly allow students to have someone to get engaged *with*, share information about events with and to encourage their engagement. For example 1st year students explained that induction week could be easier if it was later and friendships had already been formed:

'…and you haven't made close friends [by induction week] who you can say "shall we go and do this together" to. Now I feel like I have more people who I can say "would you like to go and try this" to, instead of me trying by myself.'(SEM1C)

Fourth year students were in agreement that their online community encouraged engagement behaviours:

'Everyone is encouraging engagement more this year. So every time there's a seminar that looks interesting we've got Facebook groups so people keep posting on that like 'this fossil fuel debate' or 'I'm going to go here' or we'll go along together…if other people are engaged as well, it's helping others.' (MES4A)

A third year GS student highlighted a lovely example of friendship enhancing his time in SEE:

'So, we got an email a while ago about [the British Conference for Undergraduate Research]. I saw that and wasn't particularly interested and my friends mentioned they were going so I thought, 'oh well I might as well go along' … it turned out to be one of the best experiences I've had at university... but I wouldn't have gone if my friends hadn't been interested.'(GS3A)

A 3rd year SEM student described how she felt a certain responsibility to share information with those less organised:

'I know people who are super interested in their degree…but they never check their emails so I generally tell them whether or not there is something and they will come…it's not because they don't want to do it…so I always tell them.' (SEM3C)

In the opposite regard, many students raised the idea that being in a group of friends who weren't engaged made it difficult to engage:

'If you surround yourself with people who don't want to participate it will prevent you from participating.' (MSCInd4A)

'It's a negative feedback loop. If you're in a circle of friends who aren't as enthusiastic or interested... One of the guys on our dissertation field trip was more interested than rest of his group but he was saying 'my friends don't really go for this sort of thing.' (GS3A)

In addition to these more tangible behavioural benefits, students referred to friendships as encouraging deeper learning and engagement with the course content through discussions outside of teaching:

'If somebody has a different idea and they share it with the group it increases our understanding. We're engaged in different ways so [learning] accumulates.'(GP2B)

As well as through engagement within teaching time:

'When you've got quite a large group of friends and you're sitting next to them in a lecture, it gives you that platform to feel, you're less embarrassed about asking a question to the lecturer because your friends know you and aren't going to make an assumption on anything based on what you say….knowing they would be probably be asking the same thing and almost asking things on people's behalf sometimes.' (GP2A)

This last quote links to the previous idea of engaged students feeling a certain level of responsibility for other students and suggests that engaged students have the potential to raise the level of engagement and learning for entire cohorts through their behaviours and friendships. It also links to friendships providing confidence, which was discussed in every focus group as an enabler of engagement as a whole and, indeed, to making friendships. Confidence was also linked, by students, to feeling comfortable engaging in activities even when their friendship groups were not. This was described by students as forming a positive feedback loop as shown in Figure 2.

Enablers of friendships became clear during focus group discussions, which again were linked to other aspects of University and to other elements of the framework. Cohort characteristics were identified as impacting on the ability to make friends. For example, smaller cohorts appear to allow students to feel more comfortable more quickly and build up tighter learning communities and foster a sense of belonging:

'It's a small course. I know every other [GS student] in our year. So we can have course events. We're about 22 people.' (GP2A)

'Whereas the first year GS cohort is ridiculously big, about 120… In my first year, the first person I properly got to know was the person I sat next to on the coach to Malham [The first year field trip location]. Who has been my best friend since.' (GS3A)

In addition, students can recognise different cohort cultures which have a bearing on engagement. In the EB focus group the following was discussed:

'I wanted debates and motivating each other and building something from that but I've been disappointed that that hasn't happened…I think [our cohort is] divided…along

lines of who's interested…so there's a dividing line. For me it feels like that anyway.'(EB1A)

'Ours is better. Ours is more like one big group. Although not everyone is interested we spend time together, we go out together and everyone is really friendly and nice. So they might not be people you talk about your studies with but they are really nice people. Also our group is so small compared to other programme groups…' (EB2A)

This can also be shown through the change in cohorts when some leave for Year in Industry or Year Abroad placements:

'I think our course, the year we left, weren't really engaged in the School community at all' (SEMInd4B)

'yeah, our course wasn't. Even the lecturers have noticed that. They were saying we weren't engaged at all. And then the course we've joined [after returning from Year in Industry], they're all really interested in what we're doing. Not that we weren't but they all ask a lot more questions and they're a lot more engaged…I felt like in our year we went to lectures and then it just stopped whereas they carry on.' (SEMInd4A)

When asked if the current year 3 SEM students interact with those who have returned from their Year in Industry/Year Abroad placements they replied:

'Probably more so than those that left. There are some people who we are friends with still now even though they've gone but the guys that have come back we get on quite well. It's a nice change I suppose.' (SEM3B)

'…and they said they feel more involved with our group than with the previous year. They said they like how we engage during lectures.' (SEM3C)

Indeed, this particular cohort were mentioned especially in the SEE end of year celebration as being the 'most engaged in the history of the department.'

Further discussions around friendships revealed that there are additional key enablers to these relationships being formed as well as for engagement more broadly. Societies and field trips were highlighted as two of these enablers and are explored below.
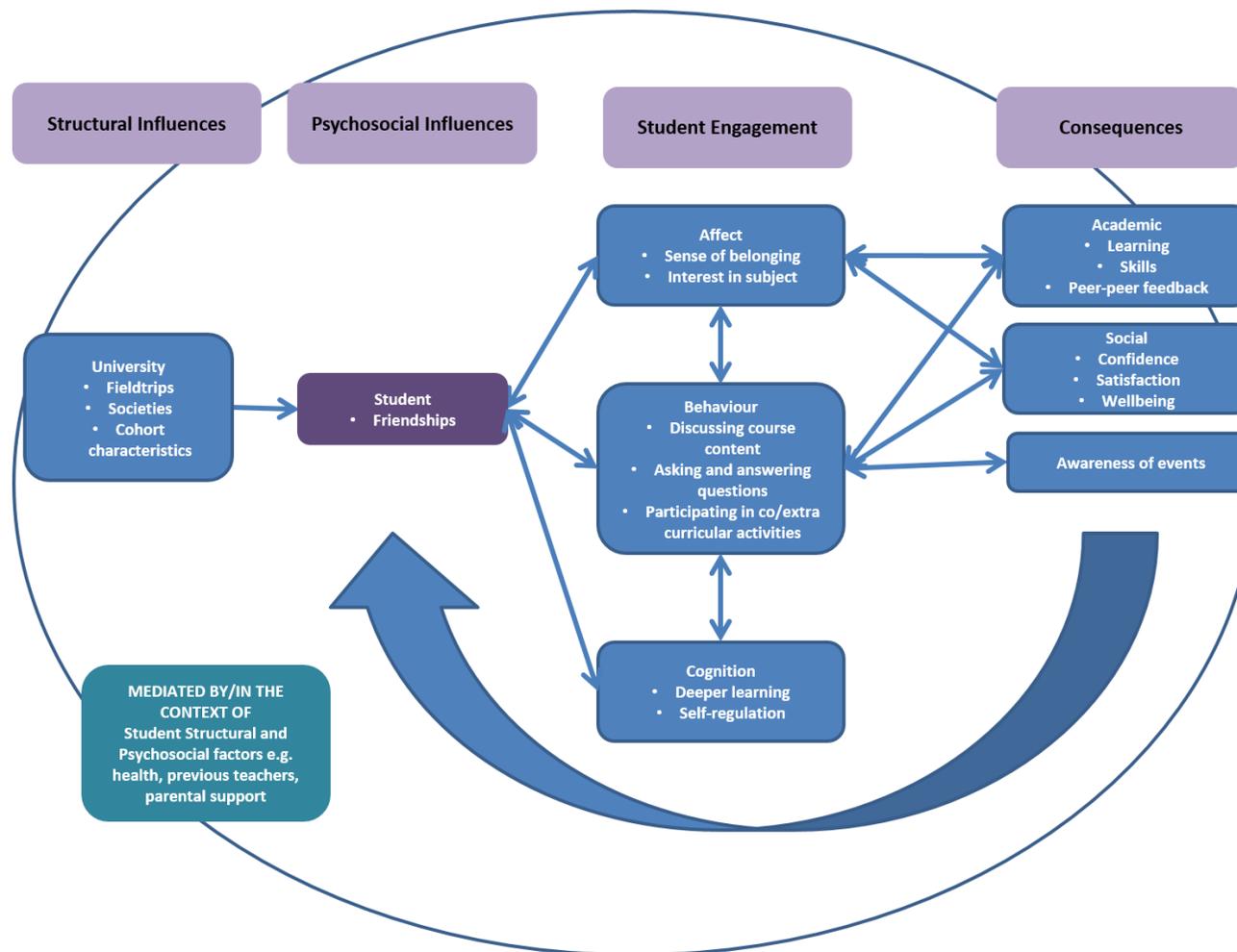
Figure 2 - Friendships as an enabler of student engagement shown under the headings of Kahu's (2013) framework. The arrows show the direction of flow, which is often two-way. The thicker blue arrow highlights the feedback loop between consequences of engagement and further engagement.

Societies

While being a member of a society was one of the most frequent responses as an indication of being engaged, it became clear during discussions that the existence of societies also play a key role in enabling engagement, in particular, through their interaction with friendship development but also in other ways (see Figure 3). Societies can be situated under the *Structural* heading related to the university and being a member of a society sits under the *Student Engagement* heading as a behaviour.

In terms of enabling friendships, societies were reported as providing a way for students to get to know each other:

'[Societies] are the main way of people getting to know other people and a real part of the uni experience. I would say it's the easiest way of getting to know people as well by engaging with the School and other people.' (ESInd4C)

'It also instantly puts you in a group with people that you must have like-minded… or something similar to have joined that group so it's easier to engage rather than meeting people at the beginning and you're like 'who are you, where are you from?' it gives you something to talk about.' (MES4A)

In addition, co-curricular societies can provide an excellent forum for exploring course content in more detail which can lead to deeper learning and interest as well as academic achievement and social satisfaction:

'I joined [RocSoc] in the first year to make friends. It seemed like the done thing to join RocSoc in geology. So I did and went along to whatever. And the [Society of Economic Geologists] as well just because they present the society as getting industry facing experience. It's a mix between making friends and improving yourself from an industry point of view. That appealed to me. I wanted to meet people who had the same interests.' (ESInd4A)

'I'm part of RocSoc which is mainly social but I've attended some of the lectures that they put on for guest speakers and that's mostly research based… It's given me a wider knowledge of the subject which I've been able to apply to the course and know a bit more about it just because of those lectures.' (GP2B)

To further support this, 1st year students from the Sustainability-facing programmes, SEM and EB, consistently stated that they were lacking this opportunity and that this forum was missing for them as the existing society was perceived to be more focused around drinking and socialising than exploring co-curricular content. While it was recognised for *'bringing the whole department together' (EB1A)* and *'mak[ing] you feel part of a bigger thing rather than just your course' (ES1C),* disappointment was expressed that it was not more focused towards, for example, '*reading or going to conferences' (EB2A)* and *'talking about the environment' (SEM1D).*

When asked if these students felt they could establish something themselves or would consider changing the culture of the existing society they expressed concern around being *'not sure that enough people would be interested' (EB1A).* One student stated:

'SEE is always emailing us about different conferences and talks. You can just go there… You don't actually even need to have a proper society to be able to be active but it would be would be just nice to go together with some people. But I think there are just one or two people from my course who would come with me…' (EB2A)

These statements again link back to friendships and confidence as enablers of engagement. The latter quote also stresses the importance of communication in encouraging students to take part in engagement activities. The Student Experience Officer in the School produces a weekly 'Bulletin' to highlight seminars and events that are relevant for students. This communication was discussed in focus groups as being key to raising awareness about opportunities. For example, 3rd Year SEM students stated:

'It's really good because we get this email which is a summary of all the events going on and it's amazing because you can just pick whatever interests you and you go.' (SEM3C)

However, in many groups it was also clear that, as in the quote above, there were other factors interacting. The statement below from the 4th year focus group was met with general agreement when discussing how their attitude to the Bulletin has changed over their time at University:

'In first and second year I never thought it was applicable to go to a guest lecture. I always thought it was for PhD students and stuff like that but now we've been to a couple this year cos you get the emails through and you think this looks interesting I might as well go. In the first and second year we got the alerts but just kind of ignored them.' (SEMInd4A)
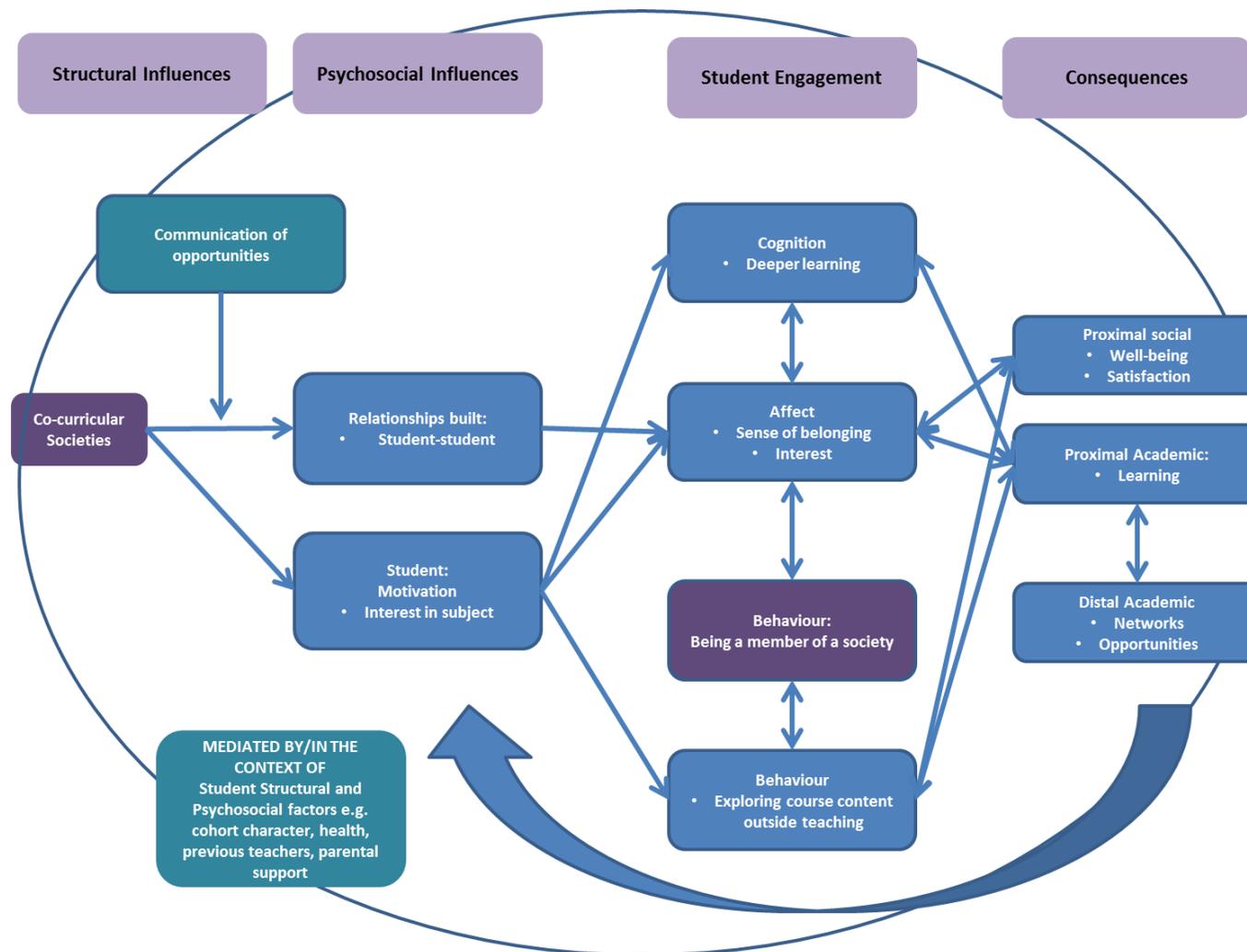
Figure 3 - Societies as an enabler of student engagement shown under the headings of Kahu's (2013) framework. The arrows show the direction of flow, which is often two-way. The thicker blue arrow highlights the feedback loop between consequences of engagement and further engagement.

Field trips

Given the nature of degree programmes in SEE, field trips are a key element of the curriculum and begin in induction week with a one-day trip to a local reservoir or geological site depending on the programme of study. Although field trips were only noted in one response as an enabler to engagement, their interaction with, and impacts on, other elements of the framework came out very strongly during discussions. Figure 4 summarises these interactions.

Field trips sit under *Structural* influences related to the university in Kahu's (2013) framework and, as such, are suggested to interact with *Psychological* influences for engagement. This was supported by students reporting in all focus groups that, most fundamentally, direct links could be made between participation in field trips and developing relationships and friendships both with other students and with staff. For example the Course Representatives stated:

'I think fieldtrips is definitely a big [way of getting to know people] (agreement from MSC2B and MGS4B) because you spend so much time with them then that you really know them by the end of a week and who you want to be around. The first one is in induction week and it's a one day walk.'(ESInd4A)

'Yes, that one's really good. I met lots of people there who are my friends now.' (SEM2A)

And first year SEM students expressed similar sentiments:

'[Our induction week field trip] was good. You were in a group and having to work together.' (SEM1C)

'Yes, the people in my group I still talk to now actually.' (SEM1D)

Field trips were highlighted as being critical for students to develop relationships with staff through varied and extended interaction, which breaks down barriers and reduces perceptions of difference between the two groups. For example the 4th year students explained:

'The field trip to Arran this year was really good because it started like one week before Freshers' week and there were 5 or 6 undergrads from Leeds who went with 5 or 6 Leeds lecturers. So you're there seeing them 8 in the morning until 11 at night every day and you feel like you really get to know them. So the fieldtrip really helped.' (MSCInd4A)

'Talking about fieldtrips, Amsterdam was really good to get to know the lecturers and stuff cos like we had lunch with them every day and one of them supervised our projects' (SEMInd4B)

4th year students and 1st year SEM students also reported greater participation in learning activities and therefore the potential for deeper learning as a result of feelings of connection to teaching staff, and students further identified approachability and knowing student names as key qualities of teaching staff that increase engagement, both of which could be facilitated through field trips:

'If [the lecturer] knows your name, then you feel like you can ask them for something whereas if it's just a random person then you think 'they don't even know who I am'…It's very clear when you're in a class, especially in a geology class, that all the lecturers know all the students' names and that's linked to the fieldwork section of it.' (MSC4A)

[Knowing the lecturer] makes you want to go to their lectures.' (SEM1A)

'Yes and it makes you more comfortable if know you can talk to lecturers if you're worried about something or have questions about what you're doing.' (SEM1C)

'It helps to clarify understanding and when you do you feel more actively engaged in the subject area.' (SEM1D)

Feeling a connection to teaching staff was also reported to lead to an increased sense of belonging and interest in the subject:

'I feel like a part of SEE because teachers talk about research and feed in what they are doing. So it's like a connection between what they do and what you do so it's really nice how you feed us with your research.' (SEM3C)

Researcher 'So hearing about our research really helps you feel part of that community?'

'Yes' (SEM3C)

'Yes. Because we are almost part of that research being done because we're part of SEE and so we're learning from the research.' (SEM3B)

'And because… the gaps between lecturers and students is reduced so it's easier to feel part of SEE.' (SEM3C)

'And you're more involved with lecturers in 3rd year whereas before they are more like teachers rather than colleagues. The course structure is different and they see you as more dedicated in the third year…' (ES3A)

'In our second year [modules] we were told more about the research they are doing and so in third year we have a good idea about what we're doing about dissertations and things. And like [3SEM3] said it's not like these scientists it's just lots of close people.' (SEM3A)

Field trips also led to increased interest and motivation for the subject as students could see the real world application of theory as explained by the 3rd year SEM students when asked what SEE does to help them engage:

'Fieldtrips. I really enjoyed the field trips!' (SEM3A)

'Yes. It makes it real, like the research process and stuff. It takes it out of just learning about things and shows you what it's actually like to do research.' (SEM3B)

Starting from one point, whether it be friendships, societies or field trips, and exploring the interactions of the various elements through Kahu's (2013) framework highlights the interrelated aspects of student engagement and the feedback loops in detail. It also shows how each student is experiencing engagement in a different way from the

next due to the activities and university experience more broadly being mediated by, and happening in the context of many other factors such as a student's background. The following section evaluates what these findings mean for our understanding of student engagement and the implications for future initiatives.
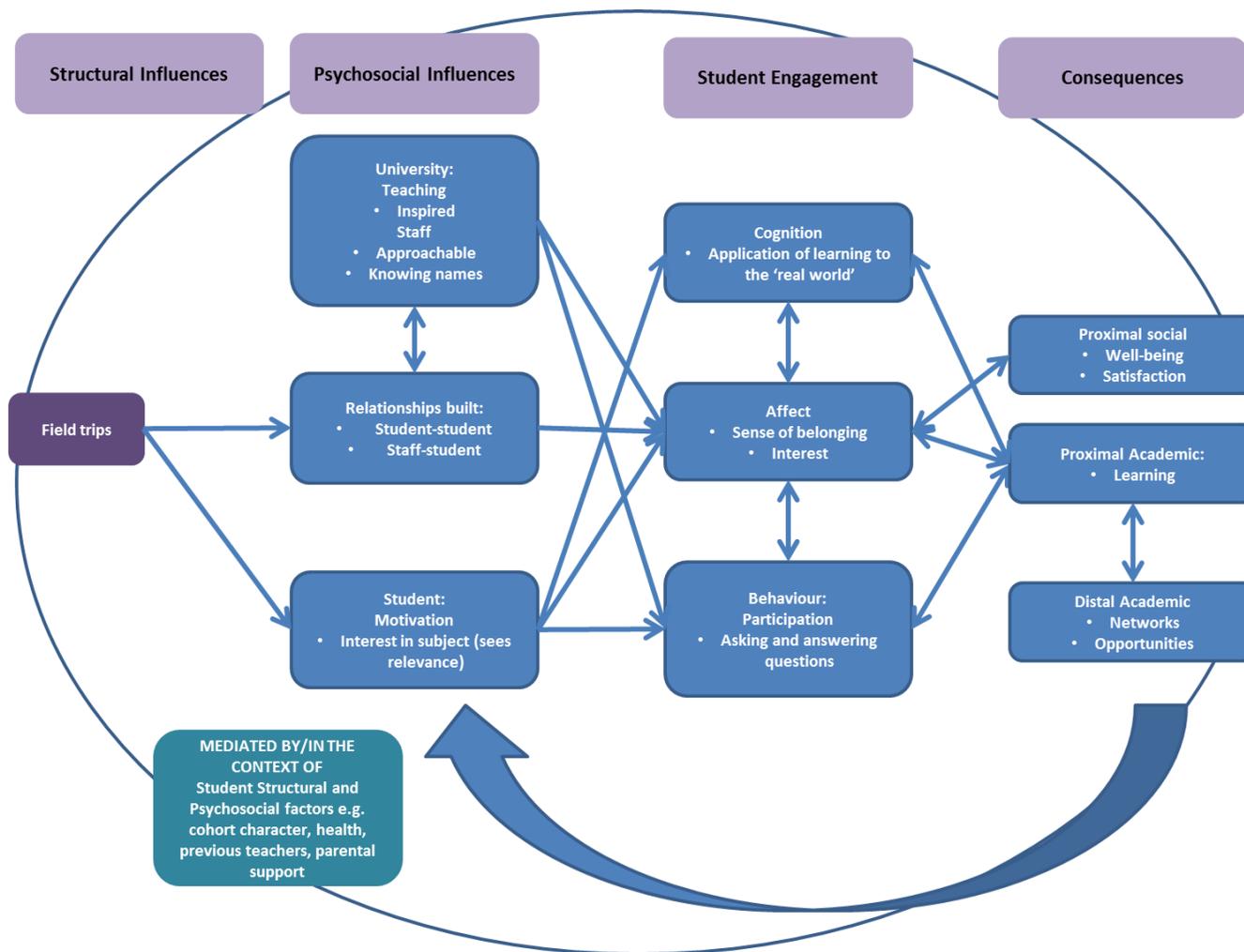
Figure 4 - Field trips as an enabler of student engagement shown under the headings of Kahu's (2013) framework. The arrows show the direction of flow, which is often two-way. The thicker blue arrow highlights the feedback loop between consequences of engagement and further engagement.

Discussion

Student perceptions of engagement, influences and consequences

It is clear that SEE students perceive engagement to be related to behavioural, cognitive, and emotional aspects. In this study students referred to a range of behaviours that indicate being engaged, including being active participants in class (Fredricks et al., 2004; Krause & Coates, 2008) as well as in social and extra-curricular activities (Fredricks et al., 2004) ranging from societies to Ambassadorial roles and even extending to jobs and voluntary work. Students therefore appeared to see broader community engagement, extending beyond university as being the same as engagement in School-level and University-level activities despite claims that they should be treated separately (McCormick, Kinzie, & Gonyea, 2013).

These behaviours also suggest an investment in learning, motivation, and self-regulation which align with a cognitive element of engagement (Appleton, Christenson, Kim, & Reschly, 2006; Gunuc & Kuzu, 2014). Different engagement activities in different years and between students support assertions by Fredricks et al. (2004, p. 65) that students 'may be both highly strategic and highly invested in learning' rather than one or the other. SEE students appear to largely prioritise strategic engagement activities in the later years of a degree as highlighted in 3rd and 4th Year post-it responses. In addition, students confirmed that an interest in the subject and a sense of belonging are indicators of being engaged that would sit within emotional engagement (Bryson & Hand, 2007; Fredricks et al., 2004; Gunuc & Kuzu, 2014). The emotional element was also strongly present in the consequences with a sense of belonging cited as one of the key benefits of being an engaged student as well as a broader sense of student satisfaction, active citizenship and knowledge and skills development aligning with previous research on the outcomes of engagement (Kuh et al., 2011; Kuh, Kinzie, Schuh, & Whitt, 2005; Pascarella et al., 2010; Zepke et al., 2010).

Influences on engagement were varied and highlighted the complexity and individuality of students' ability and willingness to engage. These data support previous research suggesting that being motivated, interested and confident enabled engagement (Coates, 2007; Fazey & Fazey, 2001; Kuh, 2003; Yorke & Knight, 2004) as well as having well-communicated opportunities for engagement facilitated by the university such as societies and scholarships (Coates, 2005; Strange & Banning, 2001).

Findings from SEE students emphasised the potential of prominent, positive feedback loops between the various elements of Kahu's (2013) framework. Our data show that building relationships between students and between students and staff are key to setting this virtuous cycle in motion. Indeed, Hardy and Bryson (2016, p. 15) state that 'without a fairly stable and sound foundation from the social sphere, engagement with the academic sphere is undermined, sometimes fatally'. In line with previous research by Llorens, Schaufeli, Bakker, and Salanova (2007), our findings show that engagement can lead to increased sense of belonging, motivation and interest, which in turn lead to further engagement behaviours, good relationships, deeper learning and further motivation to be engaged.

Implications for future student engagement in SEE and beyond

Student perceptions of engagement and the discussions around them provide valuable insights for future student engagement initiatives. Building communities between students and between students and staff as early as possible in their university career appears key to fostering a sense of belonging which is critical in encouraging engagement activities. This supports previous research that suggests social networks for emotional and academic support are fundamental to student satisfaction (Hardy & Bryson, 2016) as well as confidence and motivation (Thomas, 2002).

Our data suggest that in SEE, key means of promoting social interaction are through societies and field trips. While both encourage student interaction, field trips are able to promote student-staff as well as student-student interaction. Our data highlight that this allows students to feel more comfortable in asking staff questions and clarifying points of confusion supporting assertions by Braxton, Hirschy, Yorke, and Longden (2004) that students are more likely to ask for help when teaching staff are perceived as supportive. Field trips can also remove some of the barriers students reportedly face in engaging. For example, field trips do not require the initial confidence it takes to get involved in a society as they are part of the teaching curriculum. Hardy and Bryson (2016) identified other ways that social integration could be improved such as through peer support mechanisms, personal tutoring and thorough induction processes. Future research into how the benefits of field trips and, in particular, student-staff interaction, could be fostered in more traditional teaching environments could be useful in curriculum planning and where field trips are not possible or relevant.

Conclusion

Our research underlines the complexity of student engagement and findings emphasise that being engaged is a dynamic state that can be impacted by a plethora of influences and can result in various consequences. While our data highlight the potential for prominent positive feedback loops in engagement, they also support assertions by Kahu (2013, p. 768) that 'there is a dominant direction from influences to engagement, and from engagement to the consequences'. Furthermore, our research suggests that one of the most important influences on engagement is the promotion of student-student and student-staff interaction and therefore places the 'relationships' element of the framework as central to increasing student engagement. Our findings support Hardy and Bryson's (2016) conclusion that universities must find ways to create, nurture and develop relationships in order to promote engagement and positive Higher Education experiences. In SEE, key enablers of these relationships were identified as field trips, friendships and societies. Kahu's (2013) framework proved very useful for holistically evaluating student perceptions of engagement in SEE and could be a useful tool for evaluating current student engagement initiatives as well as designing new ones. Explicit use of the framework to map the potential influences, consequences and feedback loops created by new and existing curricular, co-curricular or extra-curricular initiatives, particularly with student input, could ensure efficient and effective allocation of resources in other contexts.

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