The Effect of Online Social Networking on Facilitating Sense of Belonging among University Students Living Off Campus

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Abstract: The study examines how the use of online social networking sites can help social and academic integration among students who are living off campus. Research has shown that students who live off campus during the academic year experience greater difficulty with social integration, particularly in their first year. A survey was distributed among a cohort of 370 first year undergraduate students, measuring their sense of belonging to the institution and their attitudes towards student life. Students who lived on campus and who used social networking sites reported stronger sense of belonging than students living off campus. A significant interaction effect indicated that using social networking sites reduced the difference in sense of belonging between students living on and off campus. Scores on the attitude scale were significantly related to sense of belonging. The results suggest the use of online networking can aid social integration among students who do not have the advantage of the face-to-face interaction that takes place in residential life on campus.

Introduction

Going to university is for most students both an exciting and daunting experience. Students face many new challenges such as meeting new people, making friends, living away from home, and taking on academic responsibilities. It is also an important part of the transition to adulthood for an increasing number of young people. According to the Higher Education Statistics Agency (HESA) the number of students accepted on to courses at British universities passed 500.000 in 2009. During this transition stage, the degree to which students feel they belong to the institution at which they are enrolled can have a significant impact on their overall experience of university life, satisfaction, and academic attainment. Many educational researchers are in agreement that the sense of belonging, or the cohesion a student has with a particular institution, is one of the most important requirements to ensure individuals' proper functioning within a learning environment (Deci & Ryan, 1985; Connell & Wellborn, 1991; Goodenow, 1993; Finn, 1989; Osterman, 2000). Social integration is consistently found to impact student persistence, and developing valued relationships is an important part of that integration (Astin 1984; Tinto 1998). Studies show that attrition often occurs among first year students who have not been integrated into the campus community (Christie & Dinham 1991). The present study is part of a larger project funded by the Paul Hamlyn Foundation and the Higher Education Funding Council for England (HEFCE) investigating antecedents and effects of sense of belonging among students at the University of Leicester, UK.

Sense of Belonging

Undergraduate student persistence is a broadly studied topic within the field of higher education studies. Key in this work is the research of Tinto (1975, 1988, 1997). Focusing on institutional structural factors, Tinto's theory posits that early withdrawal is impacted by a variety of factors. As students come into an institution, they do so with a variety of backgrounds, intents, and commitments. On arrival, two key concepts affect persistence: academic and social integration. If students are not well integrated into the university or college environment, they are at increased risk of withdrawing.

Sense of belonging as a concept is often used interchangeably with social integration. However, Hurtado and Carter (1997) argued for sense of belonging as a measure empirically distinct from integration. Sense of belonging is a psychological factor focusing on students' subjective feelings of connectedness or cohesion to the institution. In a longitudinal study, Hurtado and Carter explored a set of factors associated with sense of belonging, such as membership in religious and social groups, concluding that these were essential contributors to student persistence. The inclusion of a separate measure of sense of belonging enables researchers to examine both the participation in particular activities and what that participation means to the student. Following this it can be argued that sense of belonging taps into feelings or perceptions of association or group membership (Maestas, Vaquera & Muñoz Zehr, 2007).

Since noting the importance of sense of belonging in persistence models, other researchers have investigated factors associated with sense of belonging. Hurtado and Carter's (1997) sense of belonging measure focused on students' attachment to the campus community as a whole. Other researchers expand the concept to consider feelings of attachment to various communities or other university contexts (Hoffman, Richmond, Morrow, & Salomone, 2002; Lee & Davis, 2000; Kember & Leung, 2004). Principal distinctions of this concept rest with the two main campus communities, the students and the faculty. Hoffman et al. examined the main conceptual dimensions of a sense of belonging instrument that considered student-to-peer and student-to-faculty psychological connections. They found five factors related to sense of belonging: (1) empathetic faculty understanding, (2) perceived peer support, (3) perceived isolation, (4) perceived faculty support and comfort, and (5) perceived classroom comfort. Similarly, Kember and Leung used a measure of sense of belonging that encompasses attachments to the broader university, department, teaching staff, and peers.

Positive attitude has frequently been linked with student persistence, satisfaction and attainment (e.g. Lau, 2003). A study at Northumbria University in the UK reported that attitudes among first-year students were significantly related to a number of aspects relevant to adjusting to university life, such as managing expectations, study habits and general satisfaction. These factors, in turn, were related to early withdrawal in that negative attitudes and failure to adjust were associated with increased risk of early withdrawal (Round, 2006). Despite the strong association between attitudes and numerous factors of relevance to student life, there appears to be a lack of research exploring the relationship between attitudes and sense of belonging. This is therefore an issue that will be addressed in the present study.

Term-time Accommodation

Students' choice of term-time accommodation is based on a number of factors, though at the University of Leicester it is quite common for students to choose to live in either catered or self-catered halls in their first year. These are located around the main campus and in the student village 20 minutes from campus. In a qualitative study, Christie and Dinham (1991) identified living arrangements as an important route to social integration among college students. Students expressed that living on campus enhanced the opportunities of meeting other students, developing friendships, and shifting away from friends from home. Students living off campus felt they missed out on opportunities to meet other students. They also reported a sense of 'losing touch', and finding it difficult to get involved with people and activities. A key factor was the opportunity of gaining information about social opportunities on campus. On-campus students have easy access to written and verbal information about various extracurricular activities, whereas off-campus students are often 'cut off' from this due to spending less time within the environment. Pointing out the advantages of living in halls, the University of Leicester's Accommodation Services state "In addition to meeting and making a new circle of friends, you will have the backing of our more formal support network, including our Wardens and Sub-Wardens, who will help you deal with any personal or academic problems that may arise" (University of Leicester, 2010).

Online Social Networking

Madge, Meek, Wellens and Hooley (2009) conducted an investigation into the role of online social networking sites (specifically Facebook) in first year students' settling in to academic and social life. In a survey of 221 students they found that more than half (55 per cent) had joined Facebook to make new friends prior to entering university, while a further 43 per cent joined immediately after starting university. Nearly three quarters of the respondents said Facebook had played an important part in helping them to settle in at university. Specifically, students preferred using Facebook for social reasons, rather than for formal teaching and administrative

purposes. It was concluded that Facebook functions as a 'social glue' that helps students settle into university life, that keeps the student body together as a community, and aids in communication (especially about social events) within the student body. However, it was also stressed that Facebook is only *one* aspect of student's social networking practices and clearly face-to-face relationships and interactions remain significant.

The Study

The above theoretical perspectives indicate that social interaction and integration are key elements in students' developing a sense of belonging to their institution. Findings showing that students living off campus are at a social disadvantage suggest that it is important to identify ways of promoting social interaction and information sharing among this particular group. The idea of online social networking sites as 'social glue' is something that can be tapped into as a tool for encouraging social integration and information sharing among students who spend less time in face-to-face interaction with their peers. It was predicted that students' living arrangements would have a significant effect of self-reported sense of belonging; specifically that off-campus students would report significantly lower sense of belonging than on-campus students. It was also predicted that the use of social networking sites would have a significant effect on self-reported sense of belonging among off-campus students. Lastly, it was predicted that there would be a significant positive relationship between sense of belonging and general attitudes towards university life.

Method

Participants

A total of 375 unpaid undergraduate students at the University of Leicester participated in the survey. The students were all full-time and belonged to the departments of Biological Sciences ($N = 148$) and Medicine ($N = 216$). 11 participants did not indicate which department they belonged to. The 146 males and 218 females had an age range of 18 to 52 years ($M = 20.16$, $SD = .18$).

Design

A questionnaire design was employed to measure students' view of life at university and their sense of belonging. Two scales were used: the first was a 9-item scale measuring attitudes towards various aspects of student life; the second was a 3-item scale measuring sense of belonging to the department and the University. Both scales were designed specifically for this study. In addition data concerning participants' membership of online social networks and term time accommodation were recorded.

Materials

The Sense of Belonging scale comprised 3 statements concerning students' sense of belonging to their department and the university in general. Responses were measured on 7-point Likert scales ranging from 'strongly agree' to 'strongly disagree'. Statements are shown in Table 1.

1. I feel like a part of the university
2. There is at least one lecturer (or other person) at the University I can talk to if I have a problem
3. I feel included in my department

Table 1. Items of Sense of Belonging Scale

General attitudes towards university life consisted of a set of 9 statements concerning personal factors in relation to coping with life at university (e.g. ability to cope with workload, belief in own skills, and social support). Responses were measured on 7-point Likert scales ranging from 'strongly agree' to 'strongly disagree'. Statements are shown in Table 2.

1. I have the study skills necessary to complete the course
2. I have a suitable background in the subject I am studying
3. I am happy with the course timetable
4. I am able to cope with the course workload
5. I know where/who to go to for help if I am having problems with coursework
6. I do not have problems finding my way around the department and university campus
7. I feel overwhelmed by all the information I have been given
8. My family and friends are supportive of me going to university
9. The academic staff seem approachable

Table 2. Items of Attitude Scale

Accommodation was classified as: with parents/guardians; alone; with partner; shared house; halls of residence; self-catered halls. The question concerning online networking was "Have you made friends via social networking sites (e.g. Facebook) at university?"

Procedure

The survey was conducted at the start of a lecture. In addition to the written instructions provided for each part of the questionnaire, participants were given a brief verbal explanation before starting. They were informed of their right to withdraw, asked to read the instructions carefully and to complete the questionnaire at their own pace.

Data Analyses

An alpha level of .05 was adopted; scale data were treated as interval for the purpose of analysis. Necessary assumptions were met for all analyses. The accommodation categories were dummy-coded as on-campus and off-campus.

Results

The maximum scores were 63 for the attitude scale and 21 for the sense of belonging scale. Means and standard deviations for the scales are shown in Table 3.

		Online Social Networking					
		Yes		No		Overall	
		M	*SD*	*M*	*SD*	*M*	*SD*
Sense of Belonging	Off-Campus	15.46	(3.28)	13.68	(4.38)	14.55	(3.97)
	On-Campus	15.92	(2.98)	15.72	(2.71)	15.83	(2.85)
Attitudes	Off-Campus	49.24	(5.47)	44.56	(6.09)	46.83	(7.12)
	On-Campus	49.25	(5.55)	49.26	(5.76)	49.25	(5.67)

Table 3. Means, Standard Deviations (in parenthesis) for Scores on the Sense of Belonging and Attitude Scales Organised by Accommodation and Online Social Networking Sites.

A 2x2 between-groups Analysis of Variance (ANOVA) was carried out measuring the effect of accommodation (on/off campus) and online social networking site use (yes/no) on sense of belonging scores. A significant

interaction effect was found between accommodation and online social networking $F(1,324) = 4.34$, $p < .05$, partial eta^2 = .01. This interaction is illustrated in Figure 1. Significant main effects were found for both accommodation $F(1,324) = 11.01$, $p < .01$, partial eta^2 = .03, and online social networking $F(1,324) = 6.85$, $p <$ .01, partial eta^2 = .03. Post hoc analyses showed the on-campus group scores significantly higher than off-campus group ($p < .01$), and that those who used social networking sites scored significantly higher than those who did not ($p < .01$).
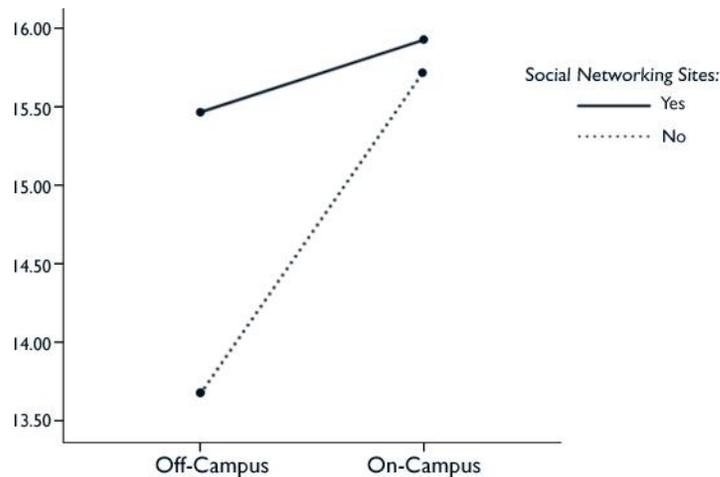

Figure 1. Interaction Effect between Accommodation and Online Social Networking Sites on Attitude Scores

A significant positive correlation was found between scores on the attitude scale and sense of belonging, $r(369)$ = .50, $p < 001$. Following this, the effect of accommodation and use of online social networking on attitude scores was measured using 2x2 between-groups ANOVA. A significant interaction effect was found between accommodation and online social networking $F(1,321) = 9.85$, $p < .01$, partial eta^2 = .03. This interaction is illustrated in Figure 1. Significant main effects were found for both accommodation $F(1,321) = 9.91$, $p < .01$, partial eta^2 = .03, and online social networking $F(1,321) = 9.77$, $p < .01$, partial eta^2 = .03. Post hoc analyses showed the on-campus group scored significantly higher than off-campus group ($p < .01$), and that those who used social networking sites scored significantly higher than those who did not ($p < .01$). Further correlation analyses were carried out looking at personal, social and academic aspects of the attitude scale separately (3 items in each category) for students who did and did not use online social networking. Results showed sense of belonging was significantly correlated to each of the three aspects ($p < .001$) among both groups of students. Sense of belonging was positively correlated to all three aspects of attitudes ($p < .001$).

Discussion

Results revealed significant effects of term-time accommodation arrangements and making friends via online social networking sites on sense of belonging scores. Students living on campus reported significantly higher sense of belonging than students living off campus; this was also the case for students who had made friends online compared to those who had not. A significant interaction effect indicated that the effect of living on or off campus diminished when accounting for use of social networking sites; in other words, off-campus students who had made friends online reported higher sense of belonging than off-campus students who had not. For on-campus students making friends online did not make a significant difference to their sense of belonging. Results also showed there was a significant relationship between scores on the attitude scale and self-reported sense of belonging, in that positive attitude was associated with stronger sense of belonging. Further analyses showed that accommodation and social networking also had an effect on attitudes in a similar way to sense of belonging. Sense of belonging was significantly related to social, academic and personal aspects of attitudes.

The findings with regards to sense of belonging among off-campus students correspond to those of previous studies (Christie & Dinham, 1993). Students who live on campus are at an advantage in that they are physically present where information about social activities is being shared, in addition to having easier access to social support from peers and accommodation staff. This in turn aids group cohesion and forming of social bonds. Students living off campus reported lower sense of belonging, which can be attributed to them spending less time interacting with peers, and thus experience less of the social inclusion and cohesion of on-campus students. The notion of online social networking sites acting as a social facilitator (Madge et al., 2009) is strengthened by the findings with respect to off-campus students. Although not a replacement for face-to-face interaction, online social networking is of increased importance to this group, and can help reduce the social and informational disadvantage experienced by off-campus students.

Sense of belonging was strongly related to general attitudes, a finding which emphasises the importance of this particular aspect of the student experience. Sense of belonging and attitudes were affected similarly by accommodation and use of social networking sites. Perhaps contrary to Madge and colleagues' (2009) suggestion, the use of social networking sites was associated with positive attitudes to academic aspects of student life, as well and social and personal aspects. This could perhaps be explained by a positive 'carry over' effect of using social networking sites. Even if the sites are not used of academic purposes *per se*, developing social bonds and cultivating a sense of belonging results in more positive attitudes. Positive attitudes, in turn, are related to increased academic attainment and adjustment, as found by Round (2006). The measure of sense of belonging used in this study was of a general nature, and at this point it is difficult to draw causal conclusions about the relationship between sense of belonging and attitudes. It is, however, clear that cultivating a sense of belonging is of overall benefit to the individual student. Sense of belonging is a multifaceted concept, and thus very difficult to define. Drawing on the present findings it might be useful in future research to adopt a more individual approach to the topic in order to gain an understanding of what the individual student sees as important for their sense of belonging to an institution, and how this translates to their use of online social networking sites.

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