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Use of Virtual Networking to Facilitate Transition to Tertiary Education

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Abstract:

Research indicates that social and academic integration are important elements in the student experience in the transition to University. There is evidence that supports improved outcomes in respect of learning and retention where there is enhanced contact with students beyond that experienced in the immediate formal academic environment. In recent years society has been increasingly exposed to a plethora of new communication opportunities with social networking sites often the vehicle of choice. This paper details the experience and subsequent analysis of student responses to their interaction with a dedicated Virtual Induction and Social Networking Site. This was created by the Centre for Excellence in Teaching and Learning (CETL) at the University of Ulster in collaboration with the Faculty of Art, Design and the Built Environment. A literature supported rationale is offered for its introduction. Direct student feedback was sought mid semester via a detailed questionnaire in order to analyse student perceptions of the site and its usefulness. The site was designed to address a number of areas indicated in published works as issues relating to prospective students. A synopsis of the feedback and detailed discussion is offered in the body of the paper. Analysis of the data reflects broad access across the various elements of the site suggesting good levels of participation with students being satisfied or very satisfied. There are also some interesting and perhaps surprising responses by the student cohorts indicating the usefulness of the site and how it could be enhanced. A number of rankings are provided indicating the relative importance to the student of each aspect of the site's functionality at inception and mid semester. These reflect changing student priorities throughout the transition period. Although a longitudinal study, the findings detailed in this paper suggest the site was successful in promoting student engagement.

Keywords: **Virtual Induction, Student Experience, Student Support**

1 Introduction and Literature Review

Studies such as Edward, N (2003) and Shobruck, S (2003) have established that some students find the transition to tertiary education challenging. Induction programmes have been suggested by Shobrook, S (2003) as a means of easing the transition. However, induction programmes have relatively short time spans and student concerns may have already built up. Tucker, J (1999) establishes the setting of academic and professional goals as key to successful retention. It therefore follows that if expectations can be clarified prior to the induction process through a suitable vehicle, then it is likely that the level of student engagement will be enhanced.

Inevitably, this requires learned institutions to move in the direction of the student, a concept which concurs with Zepke, N Leach, L and Prebble, T (2003) who show that emerging literature has found that *'Outcomes could be improved when institutions adapted their cultures to students' needs'*

This is a departure from the assimilation model espoused by Tinto, V (1993) in favour of new theories which have less underpinning empirical evidence (Zepe et al (2003)). It is therefore essential that any study exploring the effectiveness of new approaches is presented to the educational community.

A study by Krause, K and McEwen, C (2009) shows that the social and cultural context of student engagement require educators connecting inside and outside of the course context and formal learning space. They suggest this may be achieved through *'Technology which may be considered outside the educational scope'* such as Facebook or other social networking environments.

Social networking sites are based on Web 2.0 technologies defined by Anderson, P (2007) as including *'blogs, wikis, multimedia sharing service, content syndication, podcasting and content tagging services'*. He suggests that the advent of Facebook and MySpace in the public arena has led to investigation of Web 2.0 technologies within education.

Oradini, F and Saunders, G (2008) identify the use of Web 2.0 technologies as a means of increasing staff and student interaction during tertiary education. Whilst they investigate the use of Web 2.0 technologies as aids to education, this paper explores their application in the transition to higher education. IPOS MORI (2008) shows there is a large disparity between the Web technologies that students are familiar with and those applied to e-learning. It also shows that social networking websites are those with which students are most familiar.

Against this background a Virtual Induction and Social Networking site (VISNS) was developed by the University of Ulster. This was a collaborative project between the Faculty of Art, Design and the Built Environment (ADBE) and the Centre for Excellence in Teaching and Learning (CETL). It was based on the Ning social network environment due to its widespread popularity. Since 2004 some 1.8 million Ning networks have been created and there are now 37 million registered users (Ning, 2009).

2 Aims and Objectives

This paper aims to verify the extent to which social networking may aid the transition to higher education. It seeks to clarify student perceptions regarding the relevance and importance of the content of the VISNS and highlight the perceived benefits arising from its introduction.

The study has the following objectives:

1. To detail the content of the VISNS and its contribution to student transition.
2. To evaluate how the VISNS was received.
3. To assess the extent of access to the VISNS.
4. To investigate the importance of each of its elements to the student cohort.

3 Research Methodology

Fifty seven students comprising the civil engineering cohort were asked mid semester to reflect on their interaction with the VISNS. By this stage students were well established in the university and deemed able to make objective judgements on their experience of the site. They were asked to record their observations through the medium of a carefully structured questionnaire designed to elicit appropriate quantitative and qualitative responses (Hussey, J and Hussey, R (1997)). Forty four students submitted completed questionnaires equating to a 77% response. This exceeds the 70%

response threshold suggested by Eysenbach, G (2004) as necessary to ensure representativeness and eliminate bias. The questionnaire contained 39 questions addressing specific site content.

3.1 Elemental Outline of the Site

The Ning social networking environment displays extensive functionality, allowing ADBE and CETL to place resources within two broad categories, student orientation and social interaction. Student orientation was facilitated by interactive maps and photoslide shows. Social interaction was facilitated at group level by discussion boards and chat room, and at an individual level through messaging and email. A fuller description of the elements follows.

3.1.1 Interactive Map

Entering the Jordanstown Campus of the University of Ulster for the first time can be an intimidating experience. It is a large campus of 21 blocks on a 114 hectare site and has an unusual layout that can be confusing for new students. With this in mind an interactive map of the campus was designed to locate key resources for students of the Built Environment. Simply by hovering over the building footprint detailed directions to rooms, laboratories, the learning resource suite, the students union, the faculty office and other facilities are generated.

3.1.2 Photoslide Shows

Photoslide shows on the main page comprised a mix of web based photo galleries and Microsoft PowerPoint™ presentations.   Additional programme specific presentations were available on discussion boards. The objective of the shows was to appraise students of what they could expect when they arrive at Ulster. Main page presentations addressed resources students could expect to use as undergraduates and centres of world leading post graduate research. These were designed to encourage students to 'buy-in' to the ethos of the university across the full continuum of study.

3.1.3 Interpersonal Contact

Each student accepting an offer to come to Ulster received an online invitation to join the VSNS. Its acceptance allowed immediate contact with all other students associated with the School of the Built Environment. Section 4 will demonstrate that peer interaction was one of the most actively engaged aspects of the site. Students made contact for many reasons including issues around accommodation, travel arrangements, apprehension and excitement about coming to university.

There was also opportunity for students to interact with staff. Typically, students sought clarification regarding registration, the number of hours allocated to lectures and issues around general university experience.

3.1.4 Discussion Boards and Chat Room

The chat room was little used during the period of this study probably due to intermittent access. The number of students online concurrently was never significant. Consequently they tended to leave messages for each other rather than attempt to interact through the chat room. A series of course

centred discussion boards was also set up to disseminate specific information to students and allow them to interact with staff and students from their own cohort.

3.1.5 Electronic Mail

The email functionality was available to students if they felt it necessary to contact staff and other students. Each student had his/her own mailbox and the site recorded all emails ensuring they were highlighted at the next login.

4.0 Student Feedback and Analysis

Qualitative and quantitative aspects of the VSNS are addressed in questionnaire feedback presented in 4.0.1-4.0.32. These include measures of satisfaction with the site at its current stage of development. Rankings of the importance of the individual aspects of the site are presented in addition to any considerations for future development. Conclusions are presented in section 5.

4.0.1. Question 1: Did you sign up and log on to the Virtual Induction Social Networking site?

Seventy-seven percent of students signed up and logged on to the site as shown in Table 1. Those who responded 'No' were requested to provide reasons in responding to question 2 for not signing up and logging on.

Table 1 Sign up and Logon

Sign up and Logon	%
Yes	77%
No	23%

4.0.2 Question 2: If you answered No please state why

Throughout the paper all responses from students are presented as given with no correction made to grammar or spelling.

Table 2 Reasons for not signing up to the social networking site.

Reasons for not accessing the Interactive Map
Didn't know about it
I never went on after that as the course had started before I got the email invite
Didn't check email
Didn't know it existed
Didn't have access to the internet
Haven't hear about it
Didn't know about it
Didn't hear about it
Never knew about it
Never knew about it

Table 2 demonstrates that a substantial number of students did not view their email or follow the instructions on the letter of offer to join the course. The letter clearly stated that an email invitation to the site would be sent to the email address supplied on the UCAS form. Only one student did not have the means to access the site having no internet access.

4.0.3 Question 3: How Satisfied were you with the site as a whole?

Figure 1 shows there was no dissatisfaction with the site as a whole indicating that the concept behind it addressed the needs of those who used it. Thirty-four of the students responded to this question.
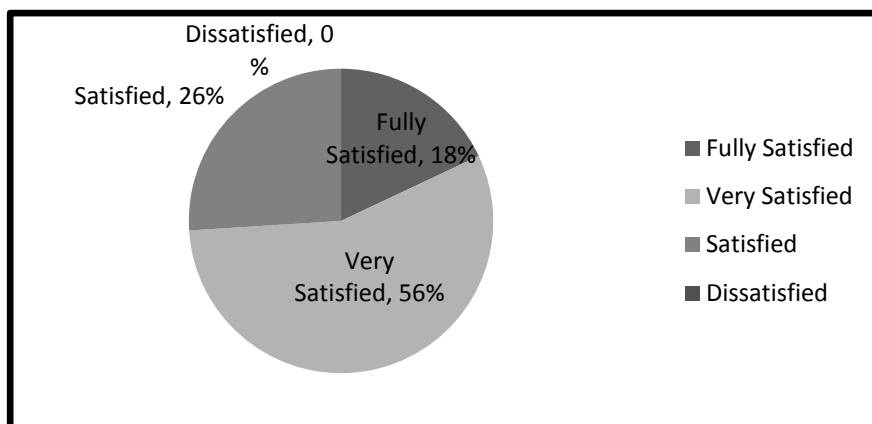
Figure 1 Student satisfaction with the Social Networking Site as a whole

4.0.4 Question 4: Could we have made the site better?

Table 3 indicates a high level of satisfaction with the site. All but one indicated that the site could not be improved. Thirty-two responses were achieved for this question. The comments of the lone student who suggested the site could be improved are presented in Table 3.

Table 3 Could we have made the site better? and suggested improvements.

Could we have made the site better	%
Yes	3%
No	97%
No Result	0%
Suggestions as to how to improve the site	
Let people chat how they want, make it 'funer' as more people will sign up	

4.0.5 Question 5: Please identify the elements of the content that you accessed

This question addressed those sections of the site the students had accessed. A breakdown is given in Figure 2 indicating high levels of access across all areas (82% highest – 62% lowest). The highest level of access was to the discussion boards (82%), followed by the interactive map, one-to-one contact with peers and the chat function (79%). It may also be observed that although the photoslide shows ranked lowest that over half of the students still accessed the information contained within them.

The high level of access to the chat function is interesting. It seems clear that even though meaningful use of this function was limited, students demonstrated clear willingness to engage had more of them been online concurrently.
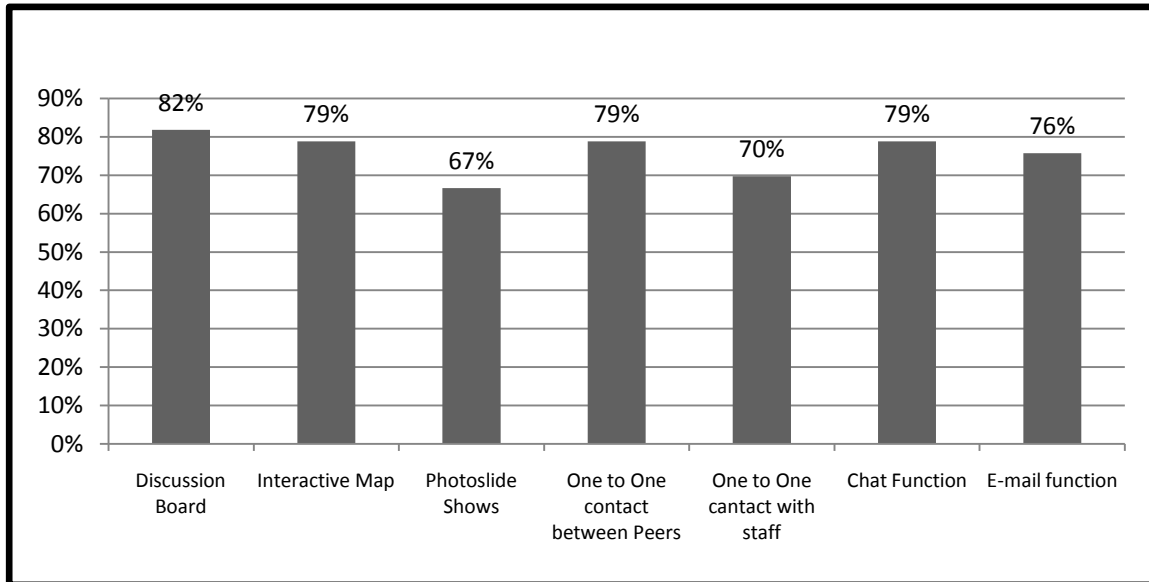

Figure 2 Areas of the site that were accessed

4.0.6 Question 6 How satisfied were you with the content of the Discussion Boards

A summary breakdown of satisfaction levels is presented in Figure 3. It indicates that members of staff involved in setting up the boards were perceptive of what would benefit and engage the students.
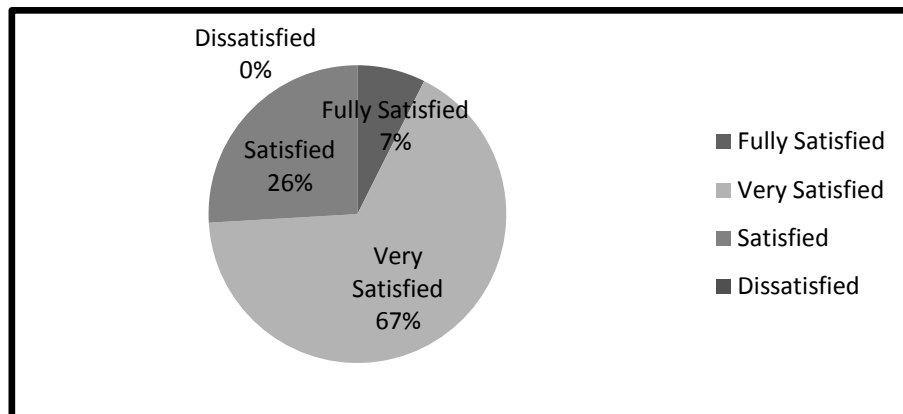
Figure 3 Discussion board satisfaction levels

4.0.7 Question 7 Could the Discussion Boards be improved? And Question 8 For what reason(s) did you not access the discussion boards?

Only one student out 27 considered any improvement could be made to the discussion boards as shown in Table 4. No comments was offered regarding how this might be achieved.

Table 4 Could the discussion boards be improved and reasons for not accessing the discussion boards.

Could the discussion boards be improved?	%
Yes	4%
No	96%
Reasons for not accessing the discussion boards	
Don't Know what it is	
Didn't think to go into it at the time	
I didn't need to discuss anything	
haven't needed 2	
No need to look when I used the site	

Students who did not access the discussion boards were asked why? Comments are presented in Table 4. It may be observed that the majority of students who responded did not feel the need to discuss issues relating to the course and therefore did not access the discussion boards.

4.0.9 Question 9 How satisfied were you with the Interactive map? And Question 10 Could the interactive map be improved?

No dissatisfaction was expressed by the 26 students who responded to this question. A summary breakdown of satisfaction levels is presented in Figure 4. All 26 students who gave their views considered that the interactive map could not be improved. This is encouraging as a significant amount of time was invested in this element of the site
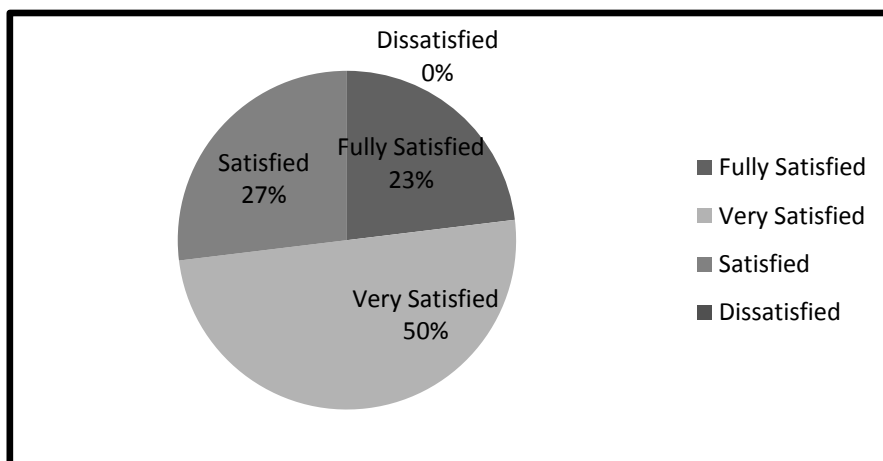

Figure 4 Interactive Map Satisfaction Levels

4.0.10 Question 11 For what reason(s) did you not view or use the interactive map?

The reasons given for not using the interactive map reflect the confidence of individual students who considered that they could comfortably navigate around the campus. Comments are presented in Table 5.

Table 5 Reasons for not accessing the Interactive Map.

Reasons for not accessing the Interactive Map
Problem with home PC and could not open it
Didn't need it
I didn't feel the need to use the map after starting university
haven't needed 2
Do not need map of campus
Didn't need it

4.0.11 Question 12 How satisfied were you with the Photoslide shows on the Virtual Induction Site and Question 13 Could the photoslide shows be improved?

It may be observed from Figure 5 that complete satisfaction with the shows was expressed. The information regarding the course and photographs of key locations throughout the campus appear to have met students' needs. None of the 23 students who responded offered any suggestions for improvement.
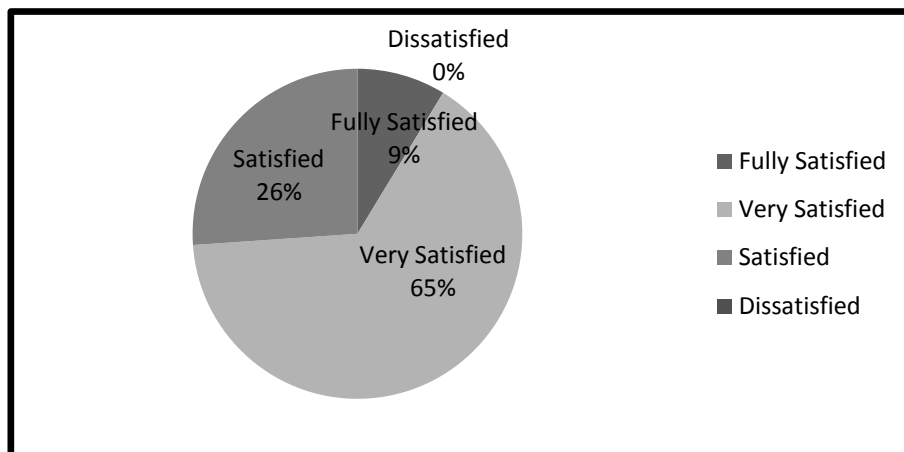

Figure 5 Photoslide Shows Satisfaction Levels

4.0.12 Question 14 For what reason did you not view or use the Photoslide show

Question 14 asked students to provide reasons for not accessing the photoslide shows. The responses are presented in Table 6.

Table 6 Reasons for not using the Photoslide shows.

Reasons for not accessing the Photoslide Shows
Did not have reason to use it
Forgot to access it
Didn't see it listed
No need to
Same, haven't needed it yet
Didn't want to
Did not know how to access it
Didn't know it was there

4.0.13 Question 15-16 How satisfied were you with the one-to-one contact between peers on the Virtual Induction Site and Question 16 Could the one-to-one contact between peers be improved?

Figure 6 shows that there was no dissatisfaction with the one-to-one contact between peers on the VISNS. A summary breakdown of satisfaction levels is presented in Figure 6. None of the 27 respondents offered any suggestions for improvement suggesting a high level of student engagement.
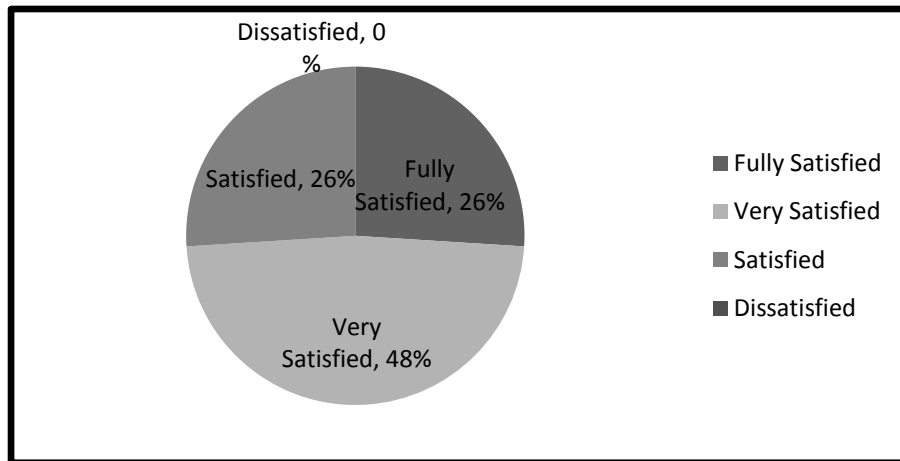

Figure 6 One-to-One Peer Contact Satisfaction Levels

4.0.14 Question 17 For what reason did you not use one-to-one contact between peers

Question 17 asked students to provide reasons for not using this aspect of the site. Responses are presented in Table 7.

Table 7 Reasons for not using the one-to-one contact between peers

Reasons for not using the one-to-one contact between peers
Noone was online
Felt no need
Didn't need to
Didn't get a chance

4.0.15 Question 18 How satisfied were you with the One-to-one contact with Staff on the Virtual Induction Site and Question 19 Could we have made One-to-one contact with staff better?

Figure 10 shows there was no dissatisfaction with this aspect of the VISNS. A summary breakdown of satisfaction levels is presented in Figure 7. All of the 25 respondents suggested this aspect could not be improved. This confirms a good quality of student / staff interaction prior to registration.
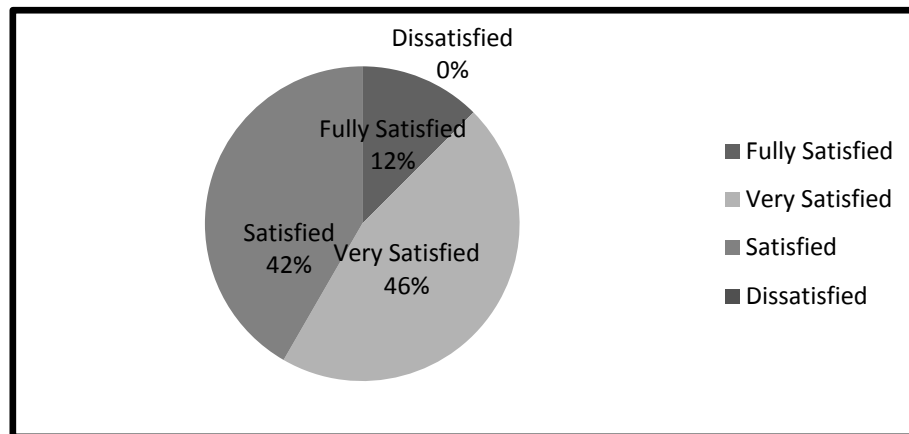
Figure 7 One-to-One Contact with staff satisfaction Levels

4.0.16 Question 20 For what reason did you not use one-to-one contact with staff

Responses to this question 19 asked students to provide reasons for not using the one-to-one contact with staff. The responses are summarised in Table 8.

Table 8 Reasons for not using the one-to-one contact with staff.

Reasons for not accessing the one-to-one contact with staff.
No desired questions to ask
I could see them in class for help on work
haven't needed 2
Didn't need to
Did not require one to one contact
Didn't need to
Didn't get a chance yet
Didn't need to

4.0.17 Question 21 How satisfied were you with the chat function and Question 22 Could we have made the chat function better?

No respondents indicated that the chat facility could be improved as shown in Figure 8. However, the extent to which the chat room was meaningfully used was very limited in spite of the fact that a high proportion of the students actually signed into it.
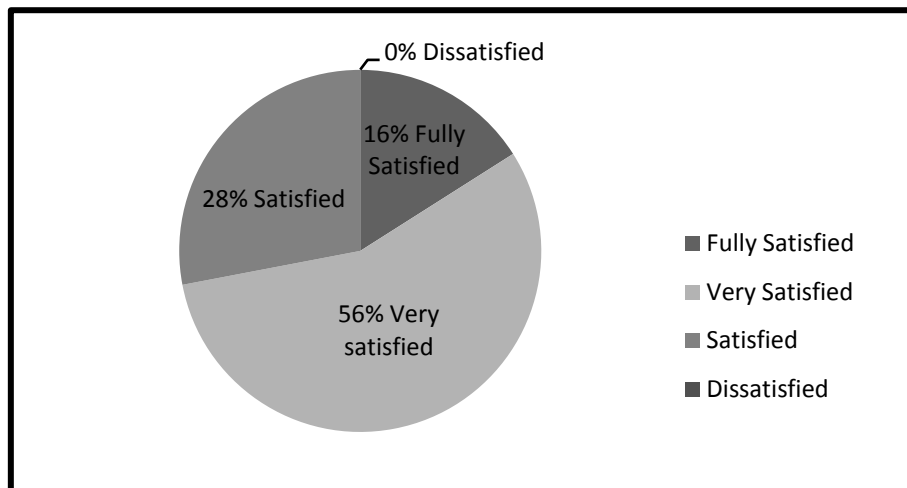
Figure 8 Chat function satisfaction levels

4.0.18 Question 23 For what reason did you not view or use the Chat function

When asked to provide reasons for not using the chat room students recorded comments presented in Table 9.

Table 9 Reasons for not using the chat room function

Reasons for not using the chat room function
I was not looking to chat
Didn't need to as made contact with class mates & teachers via the discussions
Felt no need
I didn't need to use them
look better like msn
Didn't need to chat with anyone
Didn't get a chance

Students were asked to complete questions 24 and 25 only if they had indicated that they had used the email function.

4.0.19 Question 24-25 How satisfied were you with the email function on the Virtual Induction Site? Could we have made the email function better?

Those who responded expressed no dissatisfaction with the site's email functionality with 59% very satisfied. A summary breakdown of satisfaction levels is given in Figure 9.
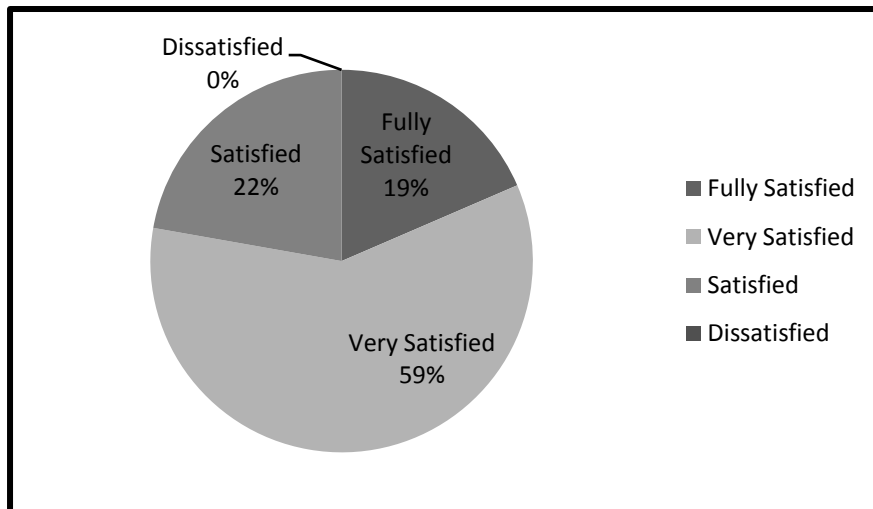
Figure 9 Email function satisfaction levels

None of the students considered that the email functionality could be improved.

4.0.20 Question 26 For what reason did you not view or use the email function?

Those who did not respond offered the following reasons as presented in were asked to give their reasons as presented in Table 10.

Table 10 Comments recorded in response to not viewing or using the e-mail function

Reasons for not viewing or using the e-mail function
Didn't look at it
Was there an email function?
Felt no need
We have a university email
Did not need it
I use my school and hotmail email

4.0.21 Please rank the functions of the Virtual Induction site in order of importance to you

Table 11 Ranking of site functionality

One to One Contact With Peers	7
Discussion Board	6
One to One Contact With Staff	5
Email Function	4
Chat Function	3
Interactive Map	2
Photoslide Shows	1

It is clear from the ranking presented in Table 11 that what students appreciate most is social interaction in general and one to one interaction in particular. The chat function appears well down

the ranking, which appears surprising in view of the preceding observation, but this is addressed under 4.0.17.

The orientation aspects of the site rank last and a superficial analysis might conclude these aspects were essentially useless. It is worth bearing in mind however, that the data on which the ranking is based was gathered mid semester and it is reasonable therefore to argue that it reflects student priorities at that stage. This appears consistent with the purpose of the site as a transition vehicle.

4.0.22 Questions 28-29 How well informed about the transition to University life did the Virtual Induction Site leave you? Could we have disseminated the information in a better manner?
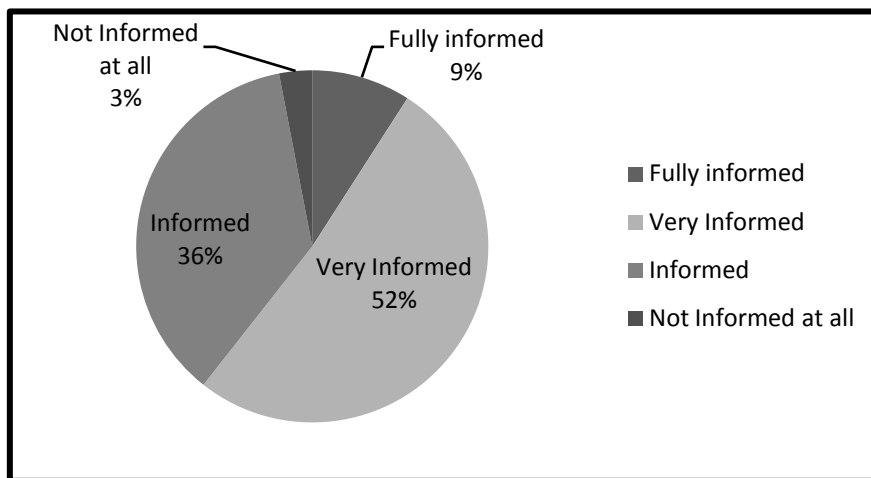

Figure 10 How well informed students felt after using the site

Table 12 Satisfaction levels with information dissemination method

Could we have disseminated the information in a better manner	%
Yes	6%
No	94%

Figure 10 indicates an overwhelming majority of respondents felt informed or very informed. A small number felt that information could have been disseminated more appropriately. Yet they did not offer any suggestions in respect of improvements. Percentages are presented in Table 12.

4.0.23 Question 30 Please indicate which functions of the site you would like to retain or remove?

It is reasonable to conclude that students appreciate the relevance and importance of all aspects of the site as 90% or more of respondents felt that all should be retained as indicated shown in Figure 11. It is concluded that staff members were perceptive in what they deemed beneficial to students. This is encouraging given ADBE has never before developed a VISNS. Ranking lowest of the three elements students thought should be removed was the one to one interaction with peers and staff aspects. This is consistent with 4.0.21 where students ranked interaction with peers and staff as 7 and 5 out of 7

respectively. If anything, by week 6 the importance of interaction with staff had increased. It therefore seems reasonable to conclude that whatever the range of web technologies, students appear to value personal interaction most at this stage of the transition process.
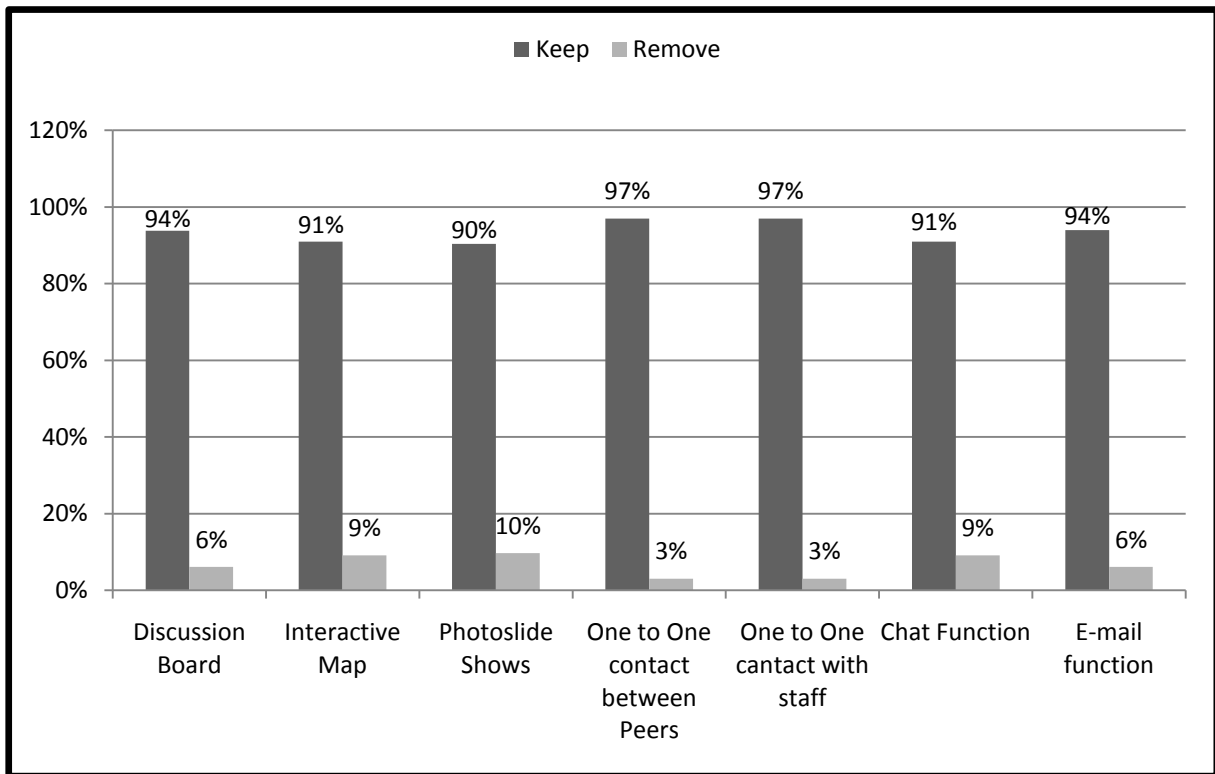

Figure 11 Site functions keep or remove

4.0.24 Question 31 What additional functionality would you like to see added to the site, if any?

Suggestions how additional functionality might be added to the VISNS are presented in Table 13. The suggestion that there should be more facility to add photographs is considered invalid as there were unlimited opportunities to upload images to the discussion boards. Addition of games without qualification is also considered invalid as not espousing the ethos of the VISNS. If the respondent meant games that stimulate intellectual and academic development within the context of the Built Environment the response might have had some merit.

Table 13 Suggestions to add functionality.

RESPONSE
Be able to add more photos
None as all relevant ones are there
More Contain of course
A few games
No it's ok

4.0.25 Question 32 To what extent do you feel the virtual induction contributed to your transition to university?

It may be argued that if 49% of the respondents experienced no change the site is not fit for purpose. However, implicit in studies such as Edward, N and Shobruck, S (2003) is that the challenge of transition to university is not universal and applies to some. The fact that approximately half of the cohort found the transition more comfortable is encouraging. For others it may not have been an issue. Of more concern perhaps is the fact that one student felt less comfortable. It is difficult to see how it would have been easier for this individual had the site not been available and it seems reasonable to argue that the discomfort may be attributable to some aspect of the course itself. A breakdown of comfort levels is given in Figure 12
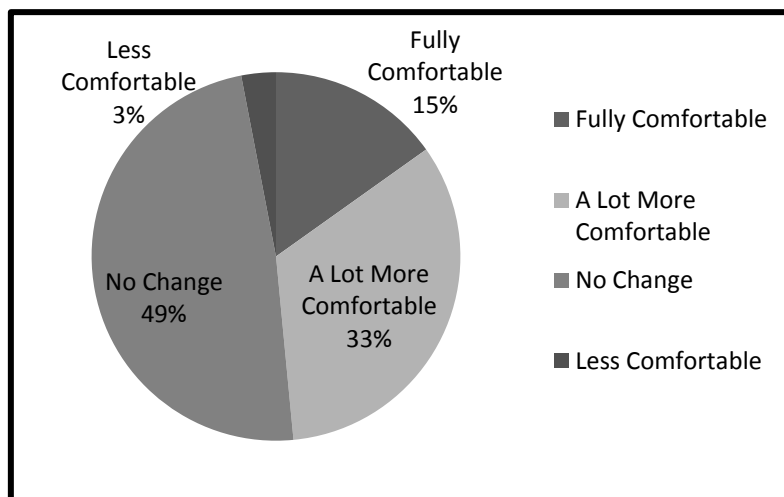

Figure 12 Student comfort levels

4.0.26 Question 33 Did the virtual induction assist in making new friends during your transition to university?

Questions 33-36 essentially address the same issues of affirmation and assurance. Figure 12 is encouraging to academic staff indicating some success in attempting to create a non threatening environment. Feedback to questions 33, 34 and 36 is very similar as may be observed in Tables 14, 15 and 16. Whilst the authors are reluctant to draw definitive conclusions a possible correlation between making new friends, feelings of security and affirmation of correct choices within an educational context may warrant further research

Table 14 Did the site assist in Students making new friends?

Did the site assist in Students making new friends?	%
Yes	58%
No	42%

4.0.27 Question 34 Do you feel this contributed to your feeling of security?

It is evident from Table 15 that the students considered that the VISNS contributed to their overall feelings of security within the University Environment.

Table 15 VISNS contribution to feelings of security

VISNS contribution to feelings of security	%
Yes	61%
No	39%

4.0.28 Question 35 Is there any way the site could be improved to make you feel more secure on arrival at university?

It is apparent from Table 16 that an overwhelming majority of students felt that no improvements were warranted.

Table 16 Scope for improvement to VISNS to enhance feelings of security

Scope for improvement to VISNS to enhance feelings of security	%
Yes	3%
No	97%

4.0.29 Question 36 On reflection did the virtual induction site help you to confirm you had chosen the correct programme of study?

Table 17 clearly indicates that the students found the VISNS helpful in confirming their choice of course.

Table 17 VISNS contribution in confirmation of correct programme of study

Scope for improvement to VISNS to enhance feelings of security	%
Yes	63%
No	37%

4.0.30 Question 37 How important did you consider it to be able to contact staff through the virtual induction website prior to attending your first lecture?

Prior contact with lecturers was deemed as either important or very important by 72% of students (Figure 13). This statistic alone reinforces the importance of student engagement with third level institutions prior to registration. Responses to questions 33-37 are indicative of a latent fear of new situations and it is incumbent on learned bodies to mitigate such anxieties in the first instance
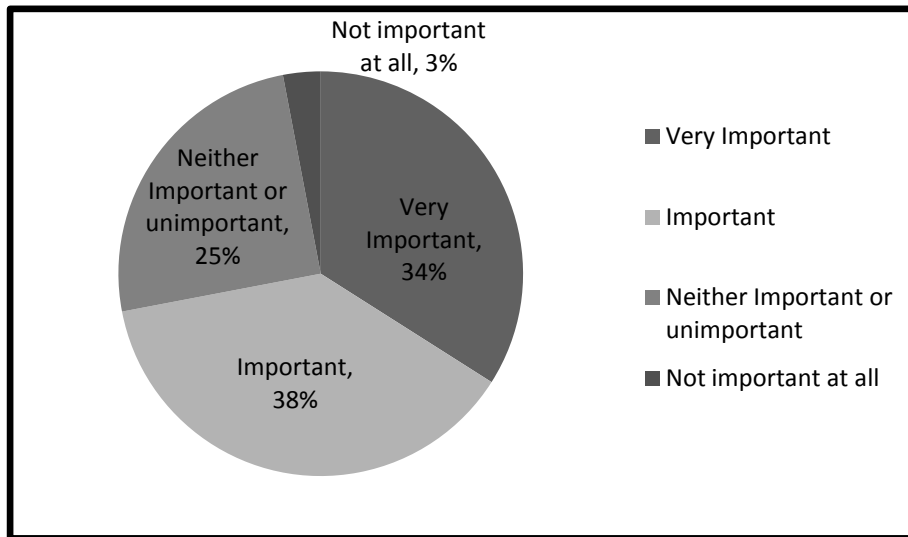
Figure 13 Importance of Contact prior to attendance

4.0.31 Question 38 To what extent do you still use the site?

Figure 14 indicates a significant decline in site access by week 6 suggesting that it has fulfilled the function for which it was designed. By this stage in the semester the transition to this stage of university experience is substantially complete. Access to the site is an occasional 'dipping in' to see if anything is going on.
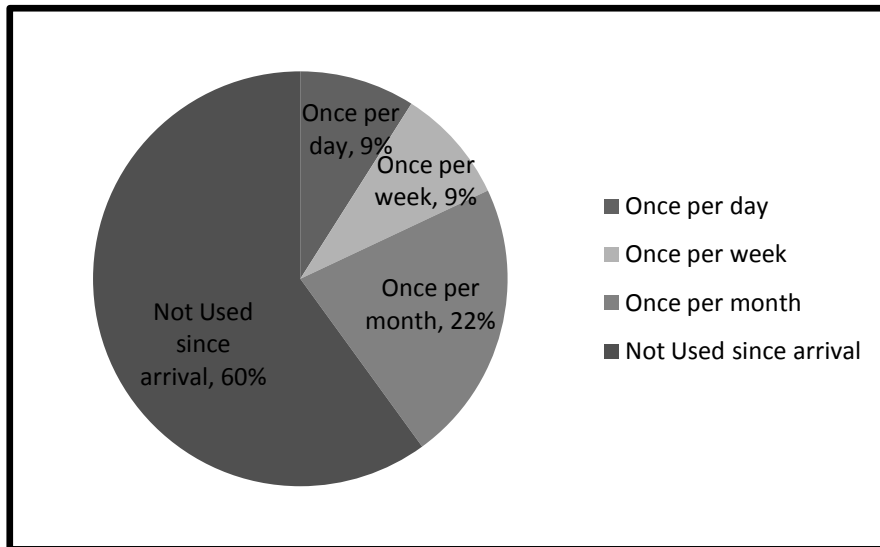

Figure 14 Use of Site at mid term

4.0.32 Question 39 Any other comments?

No further comments were provided by the students in response to this question.

5.0 Conclusions

When measured against the stated aims and objectives it is concluded that the VISNS was successful. The profile of the site has been presented in detail and an evaluation of its elements is set out in section 4. An overwhelming majority of students confirmed that every section of the site was of

value. It is also reasonable to conclude that interpersonal interaction, solidarity and affirmation were uppermost in the students' minds at the transition stage.

Declining access to the site as students progressed through the first semester suggests that they fully recognise its purpose. By mid semester online interaction had evolved into face to face contact. Whether or not the development of the VISNS will translate into improvements in retention remains to be seen and will form the basis of a later aspect of a longitudinal study of retention issues. Whatever that data reveals, the authors assert nevertheless that any process which lowers student anxieties around the transition process is of value whatever the long term outcomes.

Consideration will be given to exploring whether or not a VISNS could be extended as an educational aid to which students could contribute.

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