An Analysis of the Perceptions of Induction as Expressed by First Year Civil Engineering Undergraduates

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Abstract:

University induction programmes have been suggested as a means of increasing retention and easing student transition to higher academic study as well as the broader university experience. This paper seeks to establish as good practice the Civil Engineering induction programme for the 2009/2010 academic year. This comprised a week of carefully planned activities designed to promote student engagement and an early professional approach to study and personal development. A description and rationale for the activities are presented followed by an analysis of the student perceptions expressed in response to a comprehensive questionnaire. This addressed each element of the induction and was completed by students at its conclusion. Analysis of student feedback includes a ranking of the most engaging activities. Construction of model bridges in spaghetti and testing them to destruction proved to be the most popular followed by presentations made by professional representatives of the Institution of Civil Engineers (ICE). Site visits offering students the opportunity to view a substantial highway scheme and waste water treatment works ranked third. The least engaging activity was the guided tour of the campus. Detailed reasons are presented in the feedback suggesting that in future years smaller tour groups may be more appropriate to promoting student interaction. Student responses are recorded as given – spelling mistakes included. Feedback indicates that an overwhelming majority of students were satisfied or very satisfied with induction activities. Occasional reservations were expressed regarding the perceived intensity of the programme and timetabling of a few of its activities. Nevertheless student attendance was often 100%. It is suggested therefore that attempting to accommodate slight reservations could negate the benefits of the activities which elicited an overwhelmingly positive response. This paper demonstrates that careful planning and resources invested in the induction process is reciprocated in early student engagement.

Keywords: Induction, Student Experience, Student Support

1 Introduction and Literature Review

The first year experience is crucial to student retention, engagement with staff, peers and the learning environment (University of Ulster, (2002)). Induction programmes have been introduced by many UK Universities as a potential means of improving retention on construction courses and reinforcing staff expectations throughout students’ university experience. Tucker, J (1999) establishes the setting of academic and professional goals as key to successful retention. A successful induction week can go some way to establishing goals and mitigating the challenging transition to higher education (Edward, N (2003); Lowe, H and Cook, A (2003)).

Shobrook, S (2003) suggests that an induction programme acts as a buffer between preparation for and participation in higher education. There are many studies promoting induction (Carter, K & McNeill,
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J (1998); Tucker, J (1999); Edward, N (2003); Shobrook, S (2003)) but little published material appraising the extent to which it satisfies students’ needs.

An induction programme was implemented by the School of the Built Environment, University of Ulster. It included group activities, campus tours, introduction to professional bodies and course content.

Group activity included design and construction of spaghetti bridges which were subsequently load tested to destruction. Prizes were awarded for the most efficient structures. Field trips to civil engineering infrastructure projects provided context for the students’ studies.

2 Aims and Objectives

This paper aims to verify the success of the induction programme within civil engineering at the University of Ulster as one element of a longitudinal study of retention issues. It seeks to correlate this to the suitability of a chosen programme for students enrolled in Built Environment and clarity of medium to long term career paths.

The study has the following objectives:

1. To describe the induction programme.
2. To evaluate how well the induction programme was received.
3. To assess the extent to which the programme met its aims.

3 Research Methodology

Fifty seven students comprising the civil engineering cohort were asked on the final day of induction to complete a questionnaire. This was designed to gather quantitative and qualitative data through carefully structured questions designed to elicit reliable responses (Hussey, J and Hussey, R (1997)).

The civil engineering cohort comprised 45 male and 12 female students. Numerous articles have been published on the Built Environment being male dominated (Gale, A and Cartwright, S (1995); Sommerville, J, Kennedy, P and Orr, L (1993); Gale, A and Skitmore, M (1990)) but increasing female participation in civil engineering has been observed at the University of Ulster over the past three years. Forty-eight students responded surpassing the representativeness and bias levels indicated in Eysenbach, G (2004).

3.1 Outline of the Induction Programme

The following is a breakdown of the induction activities and their rationale.

A programme specific presentation by Course Directors commenced the first day’s activities clarifying student responsibilities, course structure and timetabling. There followed a presentation by the Head of School which appraised students of the wider university experience after which they were formally introduced to academic staff who presented in turn a synopsis of the modules that they could expect to study. Students were allocated personal Advisers of Studies and had ample opportunity to engage with staff at a personal level.

On the second day students were introduced to some initial coursework related to Construction Studies and Structural Mechanics modules for which preparation would be made during the remainder of the
week’s activities. Small groups constructed spaghetti bridges based on their own conceptual design effectively encouraging teamwork and peer interaction. Bridges were completed on day five and tested for structural and economic efficiency.

The remaining sessions of day two followed a professional theme comprising presentations by Industrials and representatives of the Institution of Civil Engineers (ICE). One ICE representative is a graduate of Ulster which helped to stimulate student engagement and identification with the University and its ethos. Presentations of significant civil engineering infrastructure schemes followed including the Westlink Highways and Belfast Tunnelling projects. Appreciation of these real world industrial presentations was demonstrated by spontaneous applause from the students.

The latter part of day two with its professional emphasis laid a sound foundation for careers presentations on day three which was designed to reinforce the concept that students ultimately have a measure of control of their own development. Presentations focussed on the professional and life long learning continuum. A student guided tour of the campus followed, identifying key learning resources and facilities prior to departure for guided tours of significant infrastructure developments.

A broad range of infrastructure was visited including highways, bridges, underpasses, multi-storey flat slab construction and wastewater treatment works. Students were especially appreciative that several of the projects had been the subjects of the previous day’s professional presentations.

Whilst emphasis on academic experience was given throughout the induction programme, day four commenced with a comprehensive presentation of key hard and soft copy learning resources available to students in the Learning Resource Suite. A presentation regarding access to and use of the University’s preferred virtual learning environment WebCT followed. Hands-on activities included a literature search and academic referencing in respect of coursework issued on day two. Three hours were allocated to construction of the spaghetti models which were concluded during the first half of the final day. Models were load tested and ranked according to their structural efficiency and utilisation of resources. Prize distribution took place over a sandwich and drink in a congenial atmosphere.

4 Student Feedback

The feedback questionnaire addressed qualitative and quantitative aspects of the induction programme. These included the extent to which students were satisfied with the programme and how they thought it might be improved. Sections 4.1-4.25 address feedback in detail and offer a summary analysis of findings.

4.1 Question 1: How satisfied were you with the induction week activities (Overall)?

No dissatisfaction was expressed by students. A summary breakdown of satisfaction levels is presented in Figure 1. This global summary indicates that staff involved in the planning and implementation of the induction activities made sound judgements of what would benefit the students.
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Figure 1 Overall Satisfaction for induction week

4.2 Questions 2: Could we have made Induction week better? If you answered ‘Yes’ to the preceding question what improvements do you suggest?

Twenty five percent of respondents suggested the induction programme could be improved as highlighted with suggestions summarised in Table 1. No attempt has been made by the authors to correct grammar etc.

Table 1 Possibility and Suggestions as to how to improve the Induction Programme.

<table>
<thead>
<tr>
<th>Could we have made Induction Week better?</th>
<th>Number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>12</td>
<td>25%</td>
</tr>
<tr>
<td>No</td>
<td>35</td>
<td>73%</td>
</tr>
<tr>
<td>No Result</td>
<td>1</td>
<td>2%</td>
</tr>
</tbody>
</table>

Suggestions as to how to improve Induction Week

- Some more activities to get to know each other better
- Possibility of smaller groups during class activities and guides around school on first day
- Very Pleased
- A lot of work load compared to other courses. They done team build exercises
- Have more get to know each other activities
- Guided tours on the first day so to the WebCt and Library Inductions
- A little bit too much information in one week
- Time could have been set aside for the class to get to know each other
- Ice breakers
- The first week was quite intense with not a lot of time off
- On the first morning have an ice breaker so the class can get an oppurtunity to meet each other
- Very large work load, get to know other students more
- Shorter Days

Although thirteen responses are presented they fall into two main areas, social interaction and workload as compared to their perceptions of other courses. Students were afforded ample opportunity to interact in small groups especially during the latter part of the programme. Activities of similar genre would have been appreciated by some earlier in the programme. It is proposed that the Civil Engineering team set aside a short session at the start of 2010 induction to address these views and offer assurances regarding workload.
4.3 Question 3: How satisfied were you with the first session Programme Induction by the Course Director?

Figure 2 shows that there was no dissatisfaction with the programme induction by the Course Directors. A summary breakdown of satisfaction levels is presented in Figure 2.

![Figure 2: Student satisfaction with the Course Directors Induction](image)

4.4 Question 4: Could we have made the first session Programme Induction by the Course Director better? If you answered ‘Yes’ to the preceding question what improvements do you suggest?

Ninety eight percent offered no suggested improvements to the Course Directors’ induction (Table 2). The following response (Table 2) was offered by one student. This is addressed within the context of 4.2.

<table>
<thead>
<tr>
<th>Could the first session Programme Induction by the Course Director be improved</th>
<th>Number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>1</td>
<td>2%</td>
</tr>
<tr>
<td>No</td>
<td>47</td>
<td>98%</td>
</tr>
<tr>
<td>No Result</td>
<td>0</td>
<td>0%</td>
</tr>
</tbody>
</table>

**Suggestions as to how to improve the first session Programme Induction by the Course Director**
On the first morning have an ice breaker so the class can get an opportunity to meet each other

4.5 Question 5: How satisfied were you with the second session School Presentation by the Head of School?

Figure 5 shows that there was no dissatisfaction with the Head of School’s Presentation. A summary breakdown of satisfaction levels is presented in Figure 3.
4.6 Question 6: Could we have made the second session School Presentation by the Head of School better? If you answered ‘Yes’ to the preceding question what improvements do you suggest?

No comments about improvement were offered indicating the format of the presentation was appropriate.

4.7 Question 7: How satisfied were you with the third session ‘School Programme Team Introduction by the Course Team’?

Figure 4 shows a summary breakdown of satisfaction levels. This shows there was no dissatisfaction with the introduction by the course team (100% satisfied or better).

4.8 Question 8: Could we have made the third session School Programme Team Introduction by the Course Team better? If you answered ‘Yes’ to the preceding question what improvements do you suggest?

It may be observed from Table 3 that 92% considered that the School Programme Team Introduction could not be improved upon.
An Investigation of the Perceptions of First Year Students about Civil Engineering Induction Week

Table 3 Could we have made the third session School Programme Team Introduction better?

<table>
<thead>
<tr>
<th>Could we have made the third session School Programme Team Introduction better?</th>
<th>Number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>4</td>
<td>8%</td>
</tr>
<tr>
<td>No</td>
<td>44</td>
<td>92%</td>
</tr>
<tr>
<td>No Result</td>
<td>0</td>
<td>0%</td>
</tr>
</tbody>
</table>

Suggestions as to how to improve the third session School Programme Team Introduction

- More enthusiasm from school team
- More enthusiasm from school team
- More enthusiasm
- Could have been more lively

Four students offered the comments in Table 3 all relating to staff enthusiasm. Whilst 8% is not considered significant of itself the consistency of the response is such that further research may be useful in ascertaining what students perceive as an enthusiastic response.

4.9 Question 9: How satisfied were you with the fourth session: Giving out the assessments and introduction to structures via spaghetti models?

Figure 5 shows marginal dissatisfaction regarding distribution of coursework, one of only two responses indicating any level of dissatisfaction. The overwhelming response is encouraging suggesting early indication of willingness of students to engage with those elements requiring self effort.

![Figure 5 Satisfaction with the giving out of assessments and introduction to structures via spaghetti models](image)

4.10 Question 10: Could we have made the fourth session ‘Giving out the assessments and introduction to structures via spaghetti models’ better? If you answered ‘Yes’ to the preceding question what improvements do you suggest?

Ninety six percent considered the fourth session could not be improved.
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Table 4 Could we have made the fourth session better?

<table>
<thead>
<tr>
<th>Could we have made the fourth session better?</th>
<th>Number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>2</td>
<td>4%</td>
</tr>
<tr>
<td>No</td>
<td>46</td>
<td>96%</td>
</tr>
<tr>
<td>No Result</td>
<td>0</td>
<td>0%</td>
</tr>
</tbody>
</table>

Suggestions as to how to improve the fourth session
Giving out the assessments and introduction to structures via spaghetti models’

Smaller groups would be better as others just took control and several had nothing to do. In our group there wasn’t any consultation when selecting a design.

The groups could have been smaller to allow for everyone to participate.

Four percent of respondents recorded comments shown in Table 4 relating to group size. One comment made by a single student states that in his/her group there was no consultation when selecting a design. Yet it is clear that no other individual made such a response. It is therefore not unreasonable to suggest that the substantive issue may be that this individual’s input was not valued by the rest of the peer group. Nevertheless, the civil engineering team aspires to reduce group size to around six in 2010.

4.11 Question 11-16: How satisfied were you with the fifth session: Introduction to the ICE – Institution of Civil Engineers?

No dissatisfaction was expressed with the introduction to the professional bodies (100% satisfied or better). A summary breakdown of satisfaction levels is presented in Figure 6.

The students were then asked to score the two ICE presentations out of 10. The results show that the first achieved an average of 8.7 and the second an average of 7.8. Four students suggested that the second presenter should speak a little louder.

Figure 6 Satisfaction with the Introduction to Professional Bodies
4.12 Question 17-22: How satisfied were you with the sixth session: Industrialist presentations?

Figure 7 presents a summary breakdown indicating that there was no dissatisfaction with the industrialist presentations (100% satisfied or better). Only one student considered it could be improved by making more information available prior to the presentations. A consideration for next year is that the schemes are announced to the groups on day two of the programme. They will then have ample opportunity to research them prior to the presentations. Additional questions asked the students to score the presentations out of ten. The presentation on the Westlink highway scheme averaged a score 8.17 and that on the Belfast Sewers 7.54.

A number of comments were offered by students indicting that presentations offered useful assistance for a proposed November coursework submission. It is concluded that the aim of the presentations was achieved. A critical comment in respect of the video aspect of the Belfast Sewer project presentation suggested that ‘the presenter should have started with this’.

![Figure 7 Satisfaction with the industrialist presentations](image)

4.13 Question 23: How satisfied were you with the seventh session “Careers”

Figure 8 presents a breakdown of satisfaction levels indicating there was no dissatisfaction with the careers presentation with 100% satisfied or better.

![Figure 8 Satisfaction with the Careers Presentation](image)
4.14 Question 24: Could we have made the seventh session ‘Careers’ better? If you answered ‘Yes’ to the preceding question what improvements do you suggest?

Table 5 indicates that 96% considered the seventh session could not be improved.

Table 5 Could we have made the seventh session better?

<table>
<thead>
<tr>
<th>Could we have made the seventh session better?</th>
<th>Number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>2</td>
<td>4%</td>
</tr>
<tr>
<td>No</td>
<td>46</td>
<td>96%</td>
</tr>
<tr>
<td>No Result</td>
<td>0</td>
<td>0%</td>
</tr>
</tbody>
</table>

Suggestions as to how to improve the seventh session ‘Careers’

It was dragged out a bit taking too long to get the point across

Two students recorded comments presented in Table 5 but only one offered a comment critical of the duration of the session. As this was an isolated comment and given that the presentation contributes to the professional development element of a five credit point module no changes are anticipated for 2010 induction.

4.15 Question 25: How satisfied were you with the eighth session ‘Guided Tour’?

Ten percent of students expressed dissatisfaction with the guided tour though 90% were satisfied or better. A summary breakdown is presented in Figure 9. Response to question 26 clarifies the reasons for dissatisfaction.

![Figure 9 Satisfaction with the Guided Tour](image-url)
4.16 Question 26: Could we have made the eighth session ‘Guided Tour’ better? If you answered ‘Yes’ to the preceding question what improvements do you suggest?

Data in Table 6 indicates that 77% considered that the eighth session could not be improved upon notwithstanding the response to question 25.

<table>
<thead>
<tr>
<th>Could we have made the eighth session better?</th>
<th>Number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>11</td>
<td>23%</td>
</tr>
<tr>
<td>No</td>
<td>37</td>
<td>77%</td>
</tr>
<tr>
<td>No Result</td>
<td>0</td>
<td>0%</td>
</tr>
</tbody>
</table>

Table 6 Could we have made the eighth session better?

Suggestions as to how to improve the eighth session ‘Guided Tour’

- The guided tour could have been at the start of induction week
- Could have spoke to the whole group
- Spoke to whole group
- Didn’t get far
- Already had a good idea of the rooms from previous days. Should have done at start of week
- Would have been on first day
- Done on the first day
- It was busy and we lost our guide
- The guide left early
- Had tour on Monday
- We could have had a tour

Eleven students offered comments presented in Table 6. The guided tours were beset by a variety of issues including group size, timing and the dedication of those charged with conducting them. It is proposed to reduce group sizes for 2010 as it is considered less likely that smaller groups will get lost. Moreover the guides’ voices should be more easily heard in crowded areas. Whilst timing seemed to be an issue for five students it misses the point of the tours which was to enable students to find their way to the rooms they would be using during the first semester. Completion of tours earlier in the programme would have necessitated a much longer day contrary to the students’ expressed wishes.

4.17 Question 27: How satisfied were you with the ninth session ‘Site Visits’?

No dissatisfaction with the site visits (100% satisfied or better) was expressed. A summary breakdown is presented in Figure 10.
4.18 Question 28: Could we have made the ninth session “Site Visits” better? If you answered ‘Yes’ to the preceding question what improvements do you suggest?

Ninety six percent considered that the ninth session could not be improved (Table 7)

<table>
<thead>
<tr>
<th>Could we have made the ninth session better?</th>
<th>Number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>2</td>
<td>4%</td>
</tr>
<tr>
<td>No</td>
<td>46</td>
<td>96%</td>
</tr>
<tr>
<td>No Result</td>
<td>0</td>
<td>0%</td>
</tr>
</tbody>
</table>

Suggestions as to how to improve the seventh session ‘Careers’
The guide could have spoken more about operations
More time

Two students recorded comments presented in Table 7. However, in order to enable the students to complete the coursework it was necessary for the guide to follow a defined brief. The time issue raised by one student is not easily resolved. The University appreciates Water NI allowing students to visit their premises and understands that Water NI staff members are busy and subject to time constraints.

4.19 Question 29: How satisfied were you with the tenth session ‘Library Induction’?

No dissatisfaction was expressed with library induction. A summary breakdown of satisfaction levels is presented in Figure 11.

Figure 11 Satisfaction with Library Induction

4.20 Question 30: Could we have made the tenth session “Library Induction” better? If you answered ‘Yes’ to the preceding question what improvements do you suggest?

Ninety four percent considered that the tenth session could not be improved (Table 8)
An Investigation of the Perceptions of First Year Students about Civil Engineering Induction Week

Table 8 Could we have made the tenth session better?

<table>
<thead>
<tr>
<th>Could we have made the tenth session better?</th>
<th>Number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>2</td>
<td>4%</td>
</tr>
<tr>
<td>No</td>
<td>45</td>
<td>94%</td>
</tr>
<tr>
<td>No Result</td>
<td>1</td>
<td>2%</td>
</tr>
</tbody>
</table>

Suggestions as to how to improve the tenth session “Library Induction”
Could have been at the start of induction week
Should have done at the start of the week

Two students noted comments shown in Table 8. It is frequently suggested that elements of the induction should commence at the beginning of the week. Self evidently this is impracticable. Moreover as students are unlikely to be using the library prior to this time it is proposed to leave this session unchanged.

4.21 Question 31: How satisfied were you with the eleventh session “WebCT Introduction”?

No dissatisfaction was expressed with the WebCT induction. A summary breakdown of satisfaction levels is given in Figure 12.

![Figure 12 Satisfaction with WebCT Introduction](image)

4.22. Question 32: Could we have made the eleventh session “WebCT Introduction” better? If you answered ‘Yes’ to the preceding question what improvements do you suggest?

Ninety six percent considered that the ninth session could not be improved as indicated in Table 9.

Table 9 Could we have made the eleventh session better

<table>
<thead>
<tr>
<th>Could we have made the eleventh session better?</th>
<th>Number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>1</td>
<td>2%</td>
</tr>
<tr>
<td>No</td>
<td>46</td>
<td>96%</td>
</tr>
<tr>
<td>No Result</td>
<td>1</td>
<td>2%</td>
</tr>
</tbody>
</table>

A single student preferred that the WebCT introduction was completed at the start of the week. As no first semester material would have been available on WebCT at this time the session could not have been a success.
4.23 Question 33: How satisfied were you with the twelfth session “Spaghetti Models”?

No dissatisfaction was expressed with the Spaghetti model bridge building. Figure 13 shows a summary breakdown of satisfaction levels.

![Figure 13](image_url)  
Figure 13 Satisfaction with the Spaghetti model bridge building

4.24 Question 34: Could we have made the twelfth session “Spaghetti Model Bridge Building” better? If you answered ‘Yes’ to the preceding question what improvements do you suggest?

Ninety eight percent considered that the ninth session could not be improved (Table 10) but one of the respondents suggested that the groups were too big nevertheless. Group size has been addressed earlier in the paper.

<table>
<thead>
<tr>
<th>Could we have made the twelfth session better?</th>
<th>Number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>No</td>
<td>47</td>
<td>98%</td>
</tr>
<tr>
<td>No Result</td>
<td>1</td>
<td>2%</td>
</tr>
</tbody>
</table>

4.25 Question 35: Any other comments?

Several students took time to offer favourable comments (Table 11) indicating that the induction programme was successful.

<table>
<thead>
<tr>
<th>Could we have made the twelfth session better?</th>
<th>Number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Fully Satisfied</td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. Very Satisfied</td>
<td></td>
<td></td>
</tr>
<tr>
<td>c. Satisfied</td>
<td></td>
<td></td>
</tr>
<tr>
<td>d. Dissatisfied</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
RESPONSE

<table>
<thead>
<tr>
<th>Satisfied</th>
<th>Induction has been great and the spagetti model project helped to get to know more people</th>
</tr>
</thead>
<tbody>
<tr>
<td>Settled in well into course, good induction week</td>
<td></td>
</tr>
<tr>
<td>Overall very good induction week</td>
<td></td>
</tr>
<tr>
<td>Thank you</td>
<td></td>
</tr>
<tr>
<td>Spaghetti models was a great introduction</td>
<td></td>
</tr>
<tr>
<td>Course good so far, although a lot people think we have work with not enough prior knowledge. Should have had more activities to get to know the class better</td>
<td></td>
</tr>
<tr>
<td>Nope</td>
<td></td>
</tr>
<tr>
<td>The model building was a very valuable activity</td>
<td></td>
</tr>
</tbody>
</table>

5 Analysis and Ranking of Responses

The outcomes considered in 4.1-4.25 indicate that the civil engineering induction programme can be considered successful. The success of the individual activities can be ranked using a points system based on the numbers of respondents within each satisfaction indicator. If the number of fully satisfied respondents is multiplied by four, the number very satisfied by three and the number satisfied by two the points total can be derived for each of the activities. Table 12 shows that the top three activities were construction and testing of Spaghetti model bridges, ICE Presentations and site visits respectively.

<table>
<thead>
<tr>
<th>Session No.</th>
<th>Points</th>
<th>Rank</th>
<th>Session Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Session 1</td>
<td>152</td>
<td>5</td>
<td>Course Directors Introduction</td>
</tr>
<tr>
<td>Session 2</td>
<td>152</td>
<td>5</td>
<td>Head of School Presentation</td>
</tr>
<tr>
<td>Session 3</td>
<td>145</td>
<td>8</td>
<td>Course Team Introduction</td>
</tr>
<tr>
<td>Session 4</td>
<td>151</td>
<td>7</td>
<td>Assessment introductions</td>
</tr>
<tr>
<td>Session 5</td>
<td>156</td>
<td>2</td>
<td>ICE Presentations</td>
</tr>
<tr>
<td>Session 6</td>
<td>140</td>
<td>10</td>
<td>Industrialist Presentations</td>
</tr>
<tr>
<td>Session 7</td>
<td>132</td>
<td>11</td>
<td>Careers Presentation</td>
</tr>
<tr>
<td>Session 8</td>
<td>125</td>
<td>12</td>
<td>Guided Tour</td>
</tr>
<tr>
<td>Session 9</td>
<td>155</td>
<td>3</td>
<td>Site Visits</td>
</tr>
<tr>
<td>Session 10</td>
<td>145</td>
<td>8</td>
<td>Library Tour</td>
</tr>
<tr>
<td>Session 11</td>
<td>153</td>
<td>4</td>
<td>WebCT Presentation</td>
</tr>
<tr>
<td>Session 12</td>
<td>167</td>
<td>1</td>
<td>Spaghetti Models</td>
</tr>
</tbody>
</table>

The rankings in Table 12 indicate the popularity of the assessment exercises chosen. However, the more mundane but equally important items such as the careers and the guided tour fared poorly. The issues identified and covered by these activities are vital to the successful completion of the course. An understanding of the course content and location of rooms may not seem attractive for students but are the essential issues that accompany daily activity within the University. The success of the induction week is therefore built around mixing the mundane activities with those that the students enjoy to arrive at a result which engages and reinforces the student experience.
Some alterations to the timing of events and group size of are proposed to improve the induction week for 2010.

### 5.0 Conclusions

The levels of overall satisfaction with the induction week activities as expressed by students, identifies the University of Ulster programme as an exemplar. Attendance figures of consistently 90% to 100% across all activities confirm significant ‘buy-in’ by students.

An individual analysis was applied to each of the remaining activities. This indicated high levels of satisfaction and support for the ethos of mixing a welcoming reception with activities designed to broaden knowledge of the civil engineering environment. There was occasional reservation expressed in respect of workload but the overwhelming positive response to the final question suggests the effort was worthwhile.

Construction and testing of spaghetti bridges as an introduction to structures proved to be the most popular activity within the programme. The associated benefits identified by students extended beyond the underlying theory of structures to social interaction and group bonding. Presentations by ICE representatives follow this activity in the ranking with site visits a close third.

At the lowest end of the ranking is the guided tour, careers presentations and presentations by Industrials. That the guided tour ranked the lowest is perhaps unsurprising given that it attracted the highest levels of dissatisfaction and criticism. Several of the comments relate to the students’ impaired interaction with the tour guide. Interestingly, two of the three highest ranking activities had substantial interactive input suggesting that students value active participation.

Ranking eleven out of twelve is the careers presentation but given that the ICE presentation ranks second it cannot reasonably be concluded that the students had little interest in their professional careers. It seems reasonable to conclude that many students would have researched career pathways during sixth form or college studies and were reasonably au fait with career opportunities. It is unlikely that students would have received a presentation by direct representatives of an appropriate professional body such as the ICE one of whom is a graduate of Ulster. It seems reasonable to conclude that this is a key reason that careers and the professional body presentations are at opposite ends of the ranking.

That the presentations by industrialists rank only ten is perhaps surprising given the positive feedback including several appreciative comments. However, the breakdown of satisfaction levels is similar to those expressed in respect of the induction programme as a whole. Moreover given the range and mean of the responses none of the activities could reasonably be construed as a failure. It is concluded that there may be very specific reasons why this activity ranks number ten. This warrants further research as to whether or not more detailed questions are required for selected activities.

As a general point it is noted that there are peripheral issues which impacted on the programme. Some related to the timing of some of the events and the size of groups. Others related to a lack of knowledge concerning university processes. However there are others which can be realistically addressed. It is proposed to re-schedule some of the activities and reduce group sizes as identified within the paper in order to enhance the induction programme for next year.

It is anticipated that following application of these minor amendments that satisfaction levels exhibited in a resoundingly successful induction programme will be retained or enhanced.
An Investigation of the Perceptions of First Year Students about Civil Engineering Induction Week

References


