Using part-time students as mentors

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Abstract
A scheme has been introduced to the civil engineering programme at Coventry University where part-time students with industry experience act as mentors for full-time first year students. Training and support for the mentors has been provided. Groups have been formed of 2 mentors and 4 or 5 mentees. At the meetings, life at work has typically been the dominant topic for discussion although matters relating to the course have also been discussed. Although the experience has been appreciated by mentees, the level of engagement has been inconsistent. Mentors have gained personal satisfaction from their involvement but have not seen it as a significant form of professional development. The scheme will continue in future years and it is hoped that changes to the course will promote engagement by full-time students.

Keywords: part-time students; mentoring; industry experience; peer support; mentor training

Background
30% of undergraduate students of civil engineering at Coventry University are part-time students in the work-force. They attend the University on day release and work in the industry for the other four days of the week.

Part-time civil engineering students at Coventry University gain 20 CATS credits by engaging with a scheme entitled ‘Contact with Practice’. They are required to organise events to pass on their industry knowledge and contacts to full-time students. The scheme has been running for four years and has been well-received by part-time and full-time students. All part-time students are required to take part in the scheme, but the impact on full-time students has not been targeted towards particular years of the course. Feedback suggests that a substantial element of the benefit gained by the full-time students is the personal contact with part-time students.

The project presented here involves extending the scheme to full-time first year students. This would give full-time first year students structured contact with a practising professional who is close in age and outlook to themselves. Specifically the aims are:

- To set up a scheme where part-time students of civil engineering at Coventry University act as mentors to full-time first year students to harness the knowledge and experience of those part-time students. This will enhance the full-time students’ awareness of the civil engineering profession, including the skills required for success.

- To develop and deliver materials, training and development to prepare part-time students for carrying out this role effectively.

Rationale
A study by Davies (2008) has demonstrated that part-time students outperform full-time students academically in spite of having generally lower qualifications on entry to courses. It attributed much
of this relative success to the skills, attitudes and motivation that part-time students have developed in the work-place. The study emphasised the importance of course teams seeing part-time students as a resource.

The Contact with Practice scheme for civil engineering students at Coventry University (Davis and Davies, 2008) has demonstrated the potential for part-time students to pass on their industry knowledge and contacts to full-time students.

Schemes in which students receive mentoring from professionals working in the industry demonstrate success in providing students with access to the knowledge and experience of an industrial mentor and a direct contact with the workplace. Ball and Scrivens (2000) describe a scheme for civil engineering students at the University of Manchester which includes a project for the students based on their contact with the mentor. Mitchell (2011) describes the role of work-based mentors for building students at the University of the West of England, including their involvement in assessment.

Peer mentoring by fellow students provides support of a different kind. Black and MacKenzie (2008) give a comprehensive review of peer support, concentrating on the first year of HE courses. They distinguish between peer tutoring, where the primary aim is academic, and peer mentoring which is more concerned with orientation and integration within university life. The peer-assisted learning (PAL) scheme at Bournemouth University (Green 2007) is an example of an approach that combines peer tutoring and peer mentoring, and involves experienced students (‘PAL Leaders’) facilitating weekly or fortnightly study support sessions for students in the year below. A similar balance between tutoring and mentoring is described by Power and Dunphy (2010) in the PASS (Peer Assisted Study Session) model of learning support at the University of Western Sydney, Australia. PASS facilitators, students in later years, offer weekly sessions on study skills and improving understanding of course content. More firmly in the realm of peer mentoring is a scheme at the University of Salford (Joddrell 2007) where built environment students in year 2 are trained in mentoring and then act as mentors to year 1 students as they carry out project work.

The Approach

The motivation for the scheme at Coventry was to combine the benefits of industrial mentoring and peer mentoring by creating structured contact between full-time first year students and fellow (part-time) students with current professional experience. It aimed to help first year students to see where their studies are leading, to allay fears that they know little about the civil engineering profession, to ease the transition to engineering studies, and to give them contact with fellow students whose skills, attitudes and motivation have increased their chances of success on the course. It also aimed to provide professional skills development to part-time students.

Years 2 and 3 of the full-time course (levels 5 and 6 in the framework for higher education qualifications) are completed in 3 years by part-time students, with the stages defined as 2a (level 2 modules), 2b (mix of level 2 and level 3 modules) and 3 (remaining level 3 modules). The decision was made to focus on stage 2b students for the mentoring role, since they have good experience of the course but are not in their final stage when study pressures might distract them from a mentoring role. Each part-time stage attends on a different day of the week so it was also felt that the scheme would be easier to manage if part-time students at one stage only were involved.

Early in October 2010 the scheme was described to part-time students at stage 2b in the context of the requirement for them to gain CP credits. Of 26 eligible students, 13 expressed an interest in acting as mentors. These students were invited to a meeting at which the scheme was described in more detail. Two further morning sessions were arranged in which the potential mentors were given training in mentoring. This training, together with subsequent support, was provided by two members of staff. One was a lecturer from another faculty of the University who had significant experience of providing training for mentors (though the existing schemes were all for mentoring in the context of university life, without the professional links implicit in this scheme). The other was a researcher who had experience of mentor training in a work context. As well as discussions and role-plays, comprehensive written reference material was provided.
Meanwhile an introductory session with first year full-time students resulted in what appeared to be an enthusiastic response, with 48 students interested in taking part in the mentoring scheme.

A meeting at the start of November was set up to introduce the mentors to the mentees, and to allow the first meeting between mentor and mentees to take place. By then one part-time student had dropped out for work-related reasons. The remaining 12 mentors attended, but, although all 48 interested first year students had been invited to the meeting, the attendance was disappointing (only 13 students). The original intention had been to form groups of one mentor with three mentees. One-to-one mentoring had never been envisaged, and so groups were formed with 2 mentors working together. The other first year students were subsequently contacted by email, and a further 14 indicated that they would still like to be included. They were added to a group and put in contact with the relevant mentors by email. This produced six mentor groups, each including two mentors and four or five mentees. In total there were 12 mentors and 27 mentees.

After the first meeting the groups made their own arrangements to meet. They subsequently reported attendance to the organiser (John Davies) after each meeting. Groups were expected to meet six times in the year (four times in the autumn term and twice in the spring term). All groups achieved this and some exceeded it. There was good contact between the mentors and the organiser throughout. It was clear that most of the mentors had genuine enthusiasm for the role. For many of the groups, attendance by first year students was good and the contact with the mentors was greatly appreciated, but for some groups attendance by first year students was disappointing (as discussed later).

Towards the end of the spring term, separate evaluation meetings were held with the mentors and mentees. In both cases, the students completed individual questionnaires and then took part in a discussion of the scheme which was facilitated by the organiser and recorded.

**Assessment**

This was a credit-bearing activity for the part-time students. Assessment took two forms. One was based on level of participation in the scheme, evidenced by submission of records of the meetings and attendance notes. The other was a brief reflective record in the form of the Institution of Civil Engineers’ (ICE) Development Objectives. This form of reflection was chosen as it was felt that it would be of genuine usefulness to the students leading to their qualification as Chartered or Incorporated Engineers. The mentoring scheme is relevant to four ICE Development Objectives (below) and mentors were required to write a short statement indicating how the activity contributed toward achieving them.

- Support other individuals' training and development.
- Communicate with others at all levels (presentations, exchange of information).
- Demonstrate personal and social skills. Awareness of the needs and concerns of others, set an example for others to follow.
- Promotion of the construction industry.

Satisfactory performance led to award of the credits. No mark was attached to this.

The involvement of first year students in the scheme was not linked to assessment.

**Evaluation**

At an evaluation meeting, all 12 mentors completed a questionnaire and took part in a facilitated discussion. At a separate meeting, 5 mentees completed a questionnaire and 4 took part in the facilitated discussion. A similar questionnaire was used for mentors and mentees.

The main findings are now presented under the general themes of

- Benefits to mentees
- Benefits to mentors
• Topics covered in group discussions
• Group interaction
• Problems encountered

Benefits to mentees
The questionnaire responses from mentees about whether the scheme was a good idea, and whether it had lived up to expectations, were unanimously positive.

Was very interesting and informative; explained types of roles in the industry well.

They were really enthusiastic about answering our questions.

Asked if they would advise other full-time first year students to be mentored by part-time students, 4 (80%) of first year students chose ‘Definitely’, and 1 (20%) chose ‘Very likely’, from the options ‘Definitely not’, ‘Unlikely’, ‘Possibly’, ‘Very likely’ and ‘Definitely’.

Responses to the question ‘What do you think you got out of having a mentor?’ included:

It broadened my understanding, whilst allowing me to see what actual professionals thought of a career in engineering. It helped me to confirm my choice of a future in engineering.

Gaining a better understanding of what life is like in employment and an idea of how I can prepare myself for future employment, qualities, etc.

A dose of reality. A bridge to the outside and the ability to talk to someone with experience.

Benefits to mentors
When mentors were asked in the questionnaire what they got out of the scheme themselves, there was some agreement that the experience improved professional skills, but this was not strong. The same impression was given in the discussion.

It’s something to put there … competencies for the ICE …

We’re certainly better at doing that role than we were before … any experience is good experience being a mentor … but I don’t think it’s been a massive development

Not relevant, professionally …

Most mentors derived personal satisfaction from the experience. Responses to ‘What do you think you got out of being a mentor’ in the questionnaire are generally positive.

Made me think about explaining things in a less technical way

Improved person skills with increased ability to share knowledge. Improved my own understanding of my personal development.

Self satisfaction

My first real experience of teaching/guiding in civil engineering matters

Topics covered in group discussions
It had been felt that mentors could provide an insight on the industry but also on the course. To determine the relative time spent on these topics, mentors were asked in the questionnaire to indicate the breakdown of time for topics at the meetings. The responses are on Table 1. All mentors discussed both their work and the course either ‘some of the time’ or ‘most of the time’. For 10 (83%) of the mentors, work was the dominant topic, for 2 (17%) it was the course.
Table 1: Proportion of time for topics

<table>
<thead>
<tr>
<th></th>
<th>Not at all</th>
<th>Occasionally</th>
<th>Some of the time</th>
<th>Most of the time</th>
</tr>
</thead>
<tbody>
<tr>
<td>General chit chat</td>
<td>1 (8%)</td>
<td>6 (50%)</td>
<td>5 (42%)</td>
<td></td>
</tr>
<tr>
<td>Your work</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The course</td>
<td>1 (8%)</td>
<td>9 (75%)</td>
<td>2 (17%)</td>
<td></td>
</tr>
</tbody>
</table>

To uncover more detail, mentors were asked more specifically about the ways they had discussed their work. Results are on Table 2. Straightforward description of projects appears to have had most success, with more subtle aspects concerning composition and roles within a team having slightly less success.

Table 2: Ways of sharing knowledge, experience and understanding

<table>
<thead>
<tr>
<th></th>
<th>Not tried</th>
<th>Tried with little success</th>
<th>Tried with moderate success</th>
<th>Tried successfully</th>
</tr>
</thead>
<tbody>
<tr>
<td>Describing current and past projects at work</td>
<td></td>
<td>5 (42%)</td>
<td>7 (58%)</td>
<td></td>
</tr>
<tr>
<td>Describing the composition of a project team or a permanent team</td>
<td>2 (17%)</td>
<td>7 (58%)</td>
<td>3 (25%)</td>
<td></td>
</tr>
<tr>
<td>Explaining who does what (and when)</td>
<td>1 (8%)</td>
<td>9 (75%)</td>
<td>2 (17%)</td>
<td></td>
</tr>
</tbody>
</table>

Mentors were asked in the questionnaire whether they provided advice on interpersonal and organisational skills. The results are on Table 3. Again there is slightly less success in these areas than when simply presenting projects, but still some success.

Table 3: Success in providing advice on interpersonal and organisational skills

<table>
<thead>
<tr>
<th></th>
<th>Not tried</th>
<th>Tried with little success</th>
<th>Tried with moderate success</th>
<th>Tried successfully</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teamwork</td>
<td>2 (17%)</td>
<td>3 (25%)</td>
<td>6 (50%)</td>
<td>1 (8%)</td>
</tr>
<tr>
<td>Time management</td>
<td>2 (17%)</td>
<td>8 (67%)</td>
<td>2 (17%)</td>
<td></td>
</tr>
<tr>
<td>Communication</td>
<td>1 (8%)</td>
<td>4 (33%)</td>
<td>3 (25%)</td>
<td>4 (33%)</td>
</tr>
</tbody>
</table>

Group interaction

When asked in the facilitated discussion who took the lead in meetings and whether it fell on the mentors to guide the group discussion, mentors made it clear that there was no imbalance between mentors and mentees in taking the lead or keeping the discussion alive.

*They had plenty to ask … I think actually it was more them leading*
50 – 50 really

No one had to work hard to keep up the discussion.

... [This was] ... one of the benefits of having two mentors as well [working together]

Several mentors commented that they had learnt from each other while working in pairs. There was general agreement that having mentors work in pairs, even though it had originally been a device for coping with unexpectedly low numbers of mentees at the first meeting, was effective. Asked about the perfect group size, there was agreement that it would be two mentors and four mentees. The suggestion was made that mentors should be paired in such a way that there is a contrast in their field of work.

That’s a problem we had because we had a guy who was really into roads and we were both structures

Problems encountered

The discussion with the mentors had begun with them being asked for their ‘headline’ on how the scheme had gone. All the responses related to the level of engagement of the first year students in the scheme. There were positive and negative experiences; negative experience dominated slightly. Some mentors described patchy attendance, and the most frustration was about the first year students’ lack of response to emails inviting them to meetings. In spite of being asked if there were other headlines, the mentors stayed with this as the principal issue.

I’d say we were quite fortunate … most of our mentees turned up, and as it went on more and more turned up … but I think we were more the exception …

‘We had one that was quite keen … out of the five … but she didn’t turn up half the time as well … not that keen! … that was our main problem

Once they were there they were keen and interested but getting them there was the hard bit.

We had it completely different ... we’d got to point where we’d done all six [meetings] last term … then we’ve got emails saying when’s the next meeting? …

For some of the mentors, this was a reason for the scheme not being as satisfying and rewarding as they had expected. Mentors were asked in the questionnaire ‘Has the experience lived up to your expectations?’, to which 5 (42%) said ‘yes’, 5 (42%) ‘partially’ and 2 (17%) ‘no’.

Both mentors and mentees were asked in the discussion about how this problem of engagement by full-time first year students could be overcome. Currently, whereas the mentors are earning CP credits, the mentees are simply attending out of interest. Both mentors and mentees warned against compulsion. But in fact the Department is to introduce a ‘profile of engagement’ for each student next year and it is hoped that this will be helpful in encouraging active involvement with a mentor in future years.

Discussion, Summary

The scheme has the potential to give many positive benefits to mentees and mentors. The clearest benefits to mentees appear to be gaining insights into life at work within the profession. This allowed mentees to gain confidence in their choice of career (and course), and develop their appreciation of the attributes needed in professional employment. This was done most effectively when the meetings involved presentation and discussion of actual projects. Discussion of more general issues such as team work and team roles was effective but slightly less so. Discussion also covered issues to do with studying on the course, but the interest in work dominated. Mentors generally found the experience satisfying personally but did not see it as a significant form of professional development. The main problem with the scheme as run in its first year was that mentors had higher levels of commitment than mentees, probably partly because mentors were gaining credit by their involvement whereas mentees were attending purely out of interest. Problems with the level of engagement by some mentees detracted from the quality of the experience for the mentors.
Peer mentoring schemes are quite common on university courses. Industry mentors are also a feature on some vocational courses. The scheme described here has the potential to combine the best of both these approaches by giving first year students contact with a practising professional who is also a student on their course. In the first year of operation this potential has been partially but not fully realised.

Further Development

The scheme will definitely continue. Part-time students in the next relevant cohort have been briefed about the scheme and a good number have already expressed interest. Mentor training should be easier to set up because the materials now exist. The scheme will be launched to first year students in induction week again, but the first meeting with mentors will be organised earlier, so that more interaction can take place before the distraction of coursework deadlines etc sets in. Groups will be formed that contain two mentors and (ideally) four mentees. Mentors will be paired so there is a contrast in their professional experience. In 2011/12, the Department will be introducing a ‘profile of engagement’ for each student, maintained in conjunction with the personal tutor. Attendance at mentoring meetings will be a component and it is hoped that this will help to solve the problem of the level of engagement by mentees. A further step would be to link the mentoring scheme with an item in the course that required the first year students to research and present aspects of the profession. Another possibility being considered is that part-time students could also work as mentors to year 2 full-time students, especially while the full-time students are engaged in realistic project work.

References


