INDUSTRIAL PLACEMENTS FOR UNDERGRADUATE STUDENTS – CHALLENGES AND OPPORTUNITIES

Ivor PERRY, Luisa BORG-MYATT
De Montfort University, Leicester, UK

Abstract. *Industrial placements, as part of a 'sandwich degree', have been commonplace in the UK for over thirty years. The European Union has been active in the field of trans-national industrial placements for over ten years, and is now beginning to integrate its student placement programme with other parts of its 'lifelong learning' strategy.*
It now seems timely to reflect on the challenges and benefits of an industrial placement process, and to make recommendations for best practice going forward.
Specifically, the paper will:
- *Identify the main stakeholders of Industrial Placements.*
- *Consider the current processes that are in place in the UK for industrial placements.*
- *Reflect on the processes that are in place in Europe and how they differ from the UK.*
- *Evaluate the issues faced by the main three stakeholders; students, universities, and businesses.*
- *Use Gap Analysis techniques to identify where the UK process needs definite improvement.*

Keywords: gap analysis, industrial placement.

1. UK history

One of the major educational reforms of the 1960s was the creation of Polytechnics in 1965, involving an amalgamation of around 50 technical and other colleges. (Pratt 1997) Polytechnics unlike universities, were the 'application of knowledge to solve issues'. (Whitburn, Mealing et al. 1976)

In 1964, the Crick report had recommended sandwich courses for Business Studies degrees. Later findings by Daniel and Pugh (Wyatt 1990) confirmed that sandwich courses gave graduates the opportunity to go straight into employment, once they had finished at the Polytechnics. Further studies appear to have confirmed the views about sandwich courses: in the 1980s, 75% of students believed that their courses with industrial placement were particularly relevant to their first career post as opposed to under 50% of students who had left full time courses without placement. (Wyatt 1990). A large Computing and Engineering faculty within a British university (an ex-polytechnic) was selected for study. Most students enrol for a sandwich degree, consisting of two years' study, followed by an industrial placement year, and a final year at university.

2. Methodology

Using a broadly interpretivist philosophy, an Action Research strategy was adapted, (Saunders, Lewis et al. 2003) and having identified the three main stakeholders

– students, universities and businesses, interviews were conducted with two types of employer – a large multinational and an SME - with the staff of a faculty Industrial Placement Unit, and with students from that faculty. The faculty was selected for its experience of placing over 200 students per year over the last 15 years. In order to maintain some commonality of experience, it was decided that both the students should be from the same faculty, and that the employers should also be used to dealing with the faculty. The qualitative data obtained were then analysed using Gap Analysis techniques (Reynoso and Moores 1996) to discover issues of concern and vulnerable parts of the process.

3. Current process for obtaining placements

From the beginning of the second year of the degree course, (October), students may apply through their Industrial Placement Unit, or may make their own applications. The process culminates in a one-year placement following the end of the second year exams, i.e. the following June. The majority elect to go through the Placement Unit: in 2006, 284 students were placed in this way, with only 24 finding their own placements.

If a student elects to find their own placement, they may use recruitment agencies. Alternatively, students will use their own contacts and resources. Self-placement actually results in more work for the placement unit, as it has to conduct checks and obtain details from the new employer(s) that the student has found. Whether the placement is found by the university or not, students report that the experience is a stressful one, as it comes on top of their university commitments in the second year of their degree course.

Meanwhile, employers will use their own selection methods. These vary widely; larger companies now make extensive use of online questionnaires to do the initial sifting, while smaller companies still rely on paper applications. Students and university staff agreed that online applications resulted in faster processing, and allowed the larger companies to make decisions more quickly, with the result that they seemed to be employing most of the very able students.

4. Comparison with EU initiatives

The European placement process or "Professional Insertion" is relatively new territory. Unlike the UK, EU-promoted industrial placements have not simply evolved, haphazardly. Under the umbrella of the Lifelong Learning Programme" (LLP), it is expected that an amalgamation of structures will occur, and that gradually UK structures will also change. (European Commission).

To gain an understanding of the way in which existing placement programmes were working, interviews were conducted with representatives of three institutions involved in Erasmus and Leonardo (LLP) programmes.

The responses from European contacts indicated that the experience of industrial placement was often very different from the UK.

- Placement agencies may be independent of universities, or act as joint venture institutions with universities.
- Placements are often short – frequently students will complete one or two placements, of one semester length, in a degree course.
- Many European placements are voluntary – i.e. they are not required for the completion of the degree.
- European students in general appeared well motivated to apply for placements. Many see placement as an opportunity to gain a job for the future and in recent years the number of students applying have increased as the advantages are seen to be financial and professional.
- The opportunity to work abroad is another factor which seems more appealing to European students. The current trend is for students to work over the summer months in Spain or in the US or UK.

5. Service quality and gap analysis

Most of the responses in the study clearly reflected the perceptions of each of the stakeholder communities. It is possible that those perceptions may in some instances differ from the actual activities of other stakeholders. (A possible example may be students' belief that they do not have enough information, contrasted with the view of the placement unit that a lot of information about placements is available, and available very early in the cycle).

However, work by many other writers on management (Peters, Drucker, Handy) demonstrate that the consumer's perception will have a major, probably deciding effect, on the nature of the service transaction, rather than the supplier's internal view of how good its service is. (Gilmore 2003)

One way of focusing on the significant aspects of any service process is to use Gap Analysis - in other words, to understand the gaps between suppliers' and customers' perceptions. (Slack, Chambers et al. 2003) Problems may arise when trying to assess, quantitatively, the size of these gaps. (VanDyck, Prybutkp et al. 1999) However, it has been widely used, and its ability to deliver practical insights into the nature of customer-supplier service relationship has been extensively recommended. The description of the gaps constitutes a standard framework. (Goffin and Mitchell 2005)

Gap 1:
Misinterpretation of the users' informal specification of the quality of service they expect or what gives a service value.

Students do not have experience of applying for jobs in this formal and structured manner. They believe they should be trained for this process, and there is a suggestion that they feel 'let down' by the university for not preparing them.

The placement unit is in a sense a customer of the employers, in that it is soliciting placement opportunities that it can pass on to students. There seems to be some confusion as to what guidelines the employers are working to.

Businesses (employers) are in a sense also customers of the placement unit, which will deliver to them the CVs and covering letters of students. Employers are

working to their own agenda, which may not line up with the placement unit's cycle (see the SME's reluctance to make an early decision), or may be further complicated by internal problems (as in the large company).

Gap 2:

Management set the wrong standards by taking an internal approach to their service:

- *Not knowing what is feasible*
- *Not enough standardisation*
- *No goals*

Clearly, both employers and the placement unit are driven by their own internal processes and targets. The placement unit is probably the most influential driver, in that it sets the timescales, and therefore initiates the contact with employers.

However, the pressure to achieve the number of placements may well impact the need to attain a better degree of systemisation for the benefit of students.

Gap 3:

Under performance of methodology against planned progress and performance level, or the difference between service-quality specifications and the product which is actually delivered.

This is due to:

- *Lack of control*
- *Conflicts*
- *Ambiguity*

Because there is currently no consistent, shared methodology in place in regards to the industrial placement process, there is a constant difference what is being delivered as against what both students and employers would like to see. Much of industrial placement process is informal and not written down. This in turn means that it is open to interpretation leading to much ambiguity and possibly conflicts of interest.

Gap 4:

Poor communication of what the service is and what it can be expected to be delivered by the organisation.

- *Over-promising*

Students, despite written and verbal communication, do not appear to 'receive' the messages that the placement year is important, and deserves considerable effort and planning. This suggests that new means of communication need to be investigated.

In the placement unit, there is clearly a perceived problem of 'over-promising' support, whether for students or employers.

Employers appear to be very inward-looking, and to have little investment in communicating job specifications, for example, in both an accurate and detailed manner.

Gap 5:

Expectation vs. Perception gap

- *Not knowing what is wanted or needed*
- *Customer needs not fully understood*

This gap effectively represents the cumulative effects of the other gaps.

Though it is fair to say that this service relationship is a tri-partite one, and therefore more complex than a simple bilateral arrangement, it seems clear that there is considerable confusion and delay built into the system.

Much appears to revolve around the issue of control, or ownership. The industrial placement unit seems to own the process so far as its students are concerned, but clearly does not control the process as far as employers are concerned. On the other hand, it has no real control over students, who set their second year academic targets above everything else.

While a great deal of experience and goodwill seems to exist within the industrial placement unit, and with employers, there is little to suggest that this is being harnessed and directed in a concerted manner.

6. Conclusions and recommendations

The research identified the following major problems:
- The length of time taken to apply for a job or fill out an application.
- The lack of clear understanding, by both students and employers (but mainly by students), of the university's process.
- Student motivation and their apparent inability to apply early enough for jobs.
- The quality of the applications being submitted.
- Lack of standardisation in process for businesses and universities.
- Conflicts of interest between stakeholders and their needs.

Unlike the European model, the management structure of this faculty's placement process is unclear and lacking in control. The placement unit has a manager, but she neither controls strategy or budget. Both of these are held by the Dean of the faculty. A hierarchical management relationship exists in which there is an academic as manager between the unit manager and the Dean. While the academic manager's role is (apparently) to ensure that students achieve suitable placement experiences that will support their academic studies, no clear idea of structure or role differentiation emerges from the interviews.

This finding emerged only as the research progressed, and was not initially factored in to the project, which was focused on the student experience. However, the gap between student perception of the status of the placement year and the perception of the placement unit can only be addressed by the faculty management, which is, effectively, the Dean and the academic manager, not the placement unit.

Strategy and process will need to be radically revised by the whole management team – unit manager, academic manager, and Dean, in order to address the problem. Our hypothesis (for future research) is that the notion of 'sandwich degrees' has been in place for so long, and has been managed by academics, not business people, that it has not been subject to serious review. The European experience, though in relation to a largely voluntary programme, is relevant here. The placement agencies, (though they have their own financial concerns) operate largely as autonomous organizations,

sometimes for profit, and are able to control all the activities within their part of a value chain. In interview, many students expressed their frustration at not being able to contribute any work towards placement during the summer holidays when they had little to do. As a result, much of the work that is currently done by the students in the autumn term could in fact be completed over the preceding summer. It is proposed, therefore, that the university should implement an online course which would allow students to learn from home. This course would be mandatory to all students taking a placement year. The course itself would be an interactive multimedia presentation and would also provide an online test on completion to reinforce the knowledge they have gained. Should the student fail the course, they will be required to retake it until they pass. Students will not be allowed to progress to their placement year until they have completed the course over the summer and submitted at least two versions of their CV and covering letter for checking. The covering letter will be based upon a fictional job description placed on a specially created module using the university's existing Virtual Learning Environment. This would then free time for students over the autumn, allowing them to concentrate on applying for jobs early and also giving them more time to get their university assignments under control. Additionally, online courses will allow students to work at times and locations to suit them, hopefully reducing some of the anxiety currently expressed.

If the structural problems within the university can be addressed, then it would be possible to publish and enact a code of best practice, which has been already developed by the researchers.

References

European Commission. (02/11/2006). from http://ec.europa.eu/education/index_en.html.

Gilmore, A. (2003). *Services Marketing and Management*. London, Sage

Goffin, K. and R. Mitchell (2005). *Innovation Management: Strategy and Implementation using the Pentathlon Framework*. Basingstoke, Hampshire, Palgrave MacMillan

Pratt, J. (1997). *The Polytechnic Experiment 1965-1992*, The Society of Research into Higher Education (Open University Press)

Reynoso, J. and B. Moores (1996). Towards the measurement of internal service quality. *International Journal of Service Industry Management* **6**(3): 64-83

Saunders, M., P. Lewis, et al. (2003). Research methods for business students. Harlow, Financial Times Prentice Hall

Slack, N., S. Chambers, et al. (2003). *Operations Management*. London, Pitman

VanDyck, T. P., V. R. Prybutkp, et al. (1999). Cautions on the use of the SERVQUAL measure to Access the Quality of Information Services, in *Decision Sciences* **30**(3): 1-15

Whitburn, J., M. Mealing, et al. (1976). *People in Polytechnics*. Guildford, Surrey

Society for Research into the Higher Education at the University of Surrey

Wyatt, J. (1990). *Commitment to Higher Education*. Milton Keynes, Open University Press