# A quantitative approach to assessment of work-based learning outcomes: an urban planning application

Robert Freestone [a] , Peter Williams [a] , Susan Thompson [a] & Kerry
Trembath [a]

[a] University of New South Wales , Australia

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# A quantitative approach to assessment of work-based learning outcomes: an urban planning application

Robert Freestone*, Peter Williams, Susan Thompson and Kerry Trembath[a]
*University of New South Wales, Australia*

Assessing student perceptions and opinions of their university education is now standard in quality assurance processes for learning and teaching. In Australia, the Course Experience Questionnaire (CEQ) has been institutionalised as a national survey of graduand opinion and is used as the key indicator of tertiary teaching quality. A little-used variant called the Work Experience Questionnaire (WEQ) provides an adaptation to the specific case of work-based learning. Work-based learning is a vital component of many professional degrees. It is a staple of urban planning education and yet there are few reported evaluations of specific student learning experiences. This paper illustrates the utility of the WEQ methodology when applied to codify the views of undergraduate urban planning students following a 'sandwich year' of industry training. The specific results are discussed and the wider implications of the model are assessed.

Keywords: *Course Experience Questionnaire; Student assessment; Urban planning; Work-based learning; Work Experience Questionnaire*

## Introduction

Work-based learning is a vital element of the educational experience of many tertiary students in professional fields such as medicine, nursing, law, engineering and business. Some degree programs and institutions invest considerable resources in managing a cooperative approach between traditional academic-based studies and on-the-job learning in ways that can benefit both students and employers. Within a variety of disciplinary settings, work-based learning assumes different

*Corresponding author. Faculty of the Built Environment, University of New South Wales, Sydney, NSW 2052, Australia. Email: r.freestone@unsw.edu.au
[a]Formerly Institutional Analysis and Reporting, University of New South Wales.

forms, including one-off projects, seminar-length practicums and full-time intern-ships (Garrick & Kirkpatrick, 1998).

Quality assurance for work-based learning is a longstanding educational concern (Martin, 1998; Orrell, 2004). The published research into work-based learning prac-tices and management is considerable, especially in the United States (Linn *et al.*, 2004), and a variety of assessment methodologies have been employed in the specific task of recovering student opinions (Trigwell & Reid, 1998). The choice of approach is linked to specific research questions, with a preference for qualitative means of inquiry via questionnaires, web-based surveys and focus groups when a greater depth of inquiry into perceptions of placement experiences has been required (Coll & Chapman, 2000). The quantitative approach is preferred for large-scale, compara-tive and time series analyses.

This paper takes a new direction to assessing how students view work-based learn-ing situations by applying a quantitative survey instrument designed specifically for this purpose called the Work Experience Questionnaire (WEQ). This methodology is derived from the Course Experience Questionnaire (CEQ), a standard evaluation instrument in educational assessment since the early 1990s.

The paper has two objectives: (i) to introduce and illustrate the application of the instrument as a relevant tool with an application to urban planning education; and (ii) to discuss the specific findings and key issues highlighted. To our knowl-edge, the WEQ or a similar instrument has not been used anywhere else in the world, and even in Australia it has been applied only in developing the methodol-ogy for research purposes (Martin, 1997). The paper has seven main parts: (i) a brief introduction to planning education; (ii) a review of the baseline CEQ meth-odology; (iii) its adaptation into the WEQ; (iv) a sketch of the educational setting within which it is applied; (v) an outline of the survey method; (vi) a description of the results; and (vii) a discussion of the findings, which is mindful of their possible wider applicability.

## Work-based learning in planning education

Urban planning as an applied professional study has a high degree of public visibility, interaction and responsibility (Gleeson & Low, 2000). Accordingly, work-based learning opportunities have become a staple of urban planning education. They provide students with early exposure to the communication demands, creative think-ing, problem solving, interpersonal experiences, teamwork and politics involved in planning practice.

Work-based learning is formalised in a variety of arrangements in different institu-tional and learning situations, from short bouts of service learning working with communities through semester-length internships to year-long placements. Work experience promotes the applied application of knowledge and skills, the employment prospects of students, ethical reflection on the role of planning in society and every-day practice, and helps direct students toward the precise type of career they might prefer in planning.

However, it can never be assumed that the right learning to complement academic instruction is taking place in the workplace. Regular program monitoring and evaluation is required to ensure congruence between pedagogic objectives, professional interests and student learning outcomes. Nevertheless, there are few reported evaluations of specific student learning experiences in urban planning studies. The dominant methodology employed in published accounts is basic qualitative questioning, with some capability for simple arithmetic tabulation of results to certain questions (Brooks *et al.*, 2002; Manns, 2003; Coiacetto, 2004). The WEQ constitutes a new approach, which draws directly upon an established educational methodology to tap into and organise a variety of student responses through a straightforward questionnaire format.

## The Course Experience Questionnaire

The CEQ methodology dates from the early 1980s (Ramsden, 1991). In Australian tertiary education, it has been used systemically in national teaching assessments since 1993 (Ainley & Long, 1995). It now forms the basis of an annual survey of graduate satisfaction with educational experiences at all universities and provides data for judging the overall effectiveness of degree programs. The CEQ results are a mandatory component of universities' annual data reporting requirements to the Commonwealth Department of Education, Science and Training (DEST).

The CEQ process collects information on graduating students' perceptions of their overall teaching and learning experiences in their 'courses', with this term denoting their entire degree programs. The CEQ is sent to all eligible students a few months after completion of their degrees, although final results are not available until at least a year after completion. Each institution is responsible for administering the survey to its own graduates and for conducting in-house analysis and reporting. The Graduate Careers Council of Australia also compiles national results. From 2005 selected results are being factored into a formula to determine the distribution of funding under the new Commonwealth Learning and Teaching Performance Fund.

The CEQ contains several multi-item scales designed to assess various aspects of students' course experiences. The CEQ questions present attitude statements on a standard 5-point Likert agree/disagree scale. In the dissemination of national results, scores are scaled from −100 to +100. Prior to 2002, the baseline questionnaire in Australian usage comprised 25 questions, structured as five subscales plus a single overall rating question (one original item with unambiguous results was subsequently dropped). The original scales were:

- Good Teaching (6 items);
- Clear Goals and Standards (4 items);
- Appropriate Assessment (3 items);
- Appropriate Workload (4 items);
- Generic Skills (6 items); and
- Overall Satisfaction (1 item).

The *Good Teaching Scale*, for example, measures teachers' practices in making subjects interesting, explaining things clearly, sympathy to students' learning difficulties and provision of detailed feedback on progress. High scores are associated with perceptions that these practices are present.

Following a major stocktake investigation (McInnes *et al.*, 2001), in 2002 several new scales based on an additional 25 questions were introduced to recover a broader range of student experiences. Individual institutions were given the opportunity to alter the composition of the CEQ sent to their own graduates. Three core scales were identified: Good Teaching; Generic Skills; and Overall Satisfaction. Institutions could additionally choose from a broadened suite of scales, comprising the three remaining original scales of Clear Goals and Standards, Appropriate Assessment, and Appropriate Workload plus five new ones:

- Student Support Scale (5 items) concerned with access to, and satisfaction with, facilities such as library, IT support, welfare and counselling services;
- Learning Resources Scale (5 items) concerned with the appropriateness and effectiveness of study sources and course materials;
- Learning Community Scale (5 items) on student perceptions of the social experience of learning at university;
- Graduate Qualities Scale (6 items) on general rather than area-specific skills, as well as attitudes to the relevance of lifelong learning; and
- Intellectual Motivation Scale (4 items) on perceptions of the inspirational and intellectual.

Educational researchers largely agree that the theoretical veracity and empirical basis of the CEQ methodology has been proven over two decades. It continues to be refined through the development of additional items and scales. Usage by national authorities in Australia has seen it firmly established as the key performance indicator for improving teaching performance in higher education (e.g. Hand & Trembath, 1999). The CEQ has not been without its critics. At the departmental level, it regularly draws informal complaints about the representativeness and motivations of the students actually completing surveys. Some critics also consider the extent to which graduating students' assessments of the quality of teaching and learning support experienced during their entire degree studies may be skewed toward their most immediate final year experience—for better or worse. Nevertheless, its use has proliferated into a welter of specific applications, from evaluating medical communication skills teaching (Steele *et al.*, 2003) to distance education (Richardson, 2003). In the present study, we look at an application to work-integrated learning, specifically in the field of urban planning.

*The Work Experience Questionnaire*

Elaine Martin devised the WEQ in 1997 to measure the workplace learning experiences of students in a study for the then Australian Government Department of Education, Training and Youth Affairs. It was a component of a broader investigation

of work placement in eight university courses in health science, engineering, business and social work. The overall aim was to evaluate the impact of such schemes on the professional development of students. A major conclusion was that workplace learning can be conceptualised as a 'problematic' practice in the way it continually challenges staff into seeking and managing appropriate and intensive collaborations with employers.

As its name implies, the WEQ is a direct application of CEQ methodology. It is similarly designed to explore students' perceptions of their learning environment. Martin (1997) regards it as an 'undeveloped instrument' but still one capable of measuring variation in the effectiveness of work placement components in university degrees across different disciplines. Her study showed that, as demonstrated more generally by the CEQ in university courses, its dimensions of 'clear goals' and 'support for learning' correlated highly with student learning.

The actual questions evolved from a previous study that revealed that students were most critical of work placements when they were uncertain about learning objectives and standards in the workplace, when they felt unsupported and undirected in their work, and when they felt the tasks they engaged in were trivial and menial (Martin & Bowden, 1992). Trials were undertaken to refine the instrument, resulting ultimately in a questionnaire consisting of 33 items (questions), with the bundling of certain items into scales that followed CEQ rationale (see Table 1):

● Clear Goals Scale (3 items);
● Support for Learning Scale (5 items);
● Generic Skills Scale (5 items);
● Menial Tasks Scale (3 items);
● Overall Satisfaction (1 item);
● Ungrouped individual questions (7 items); and
● Additional Generic Skills (9 items).

As with the CEQ, students are asked to respond on a conventional 5-point scale, with the normal range from strong disagreement (1) to strong agreement/concurrence (5). Intermediate points are not labelled.

## Planning education context

The site for our study is a compulsory 1-year full-time course within a 5-year undergraduate urban planning degree program offered by a large research-based metropolitan university in Australia. It is managed by a Program within a single-School faculty offering a variety of other built environment qualifications. The qualification is professionally accredited by the Planning Institute of Australia.

Across the spectrum of work-based learning opportunities, this is a 'thick' sandwich year model that is unique in planning education in Australia and now rare in global terms. Nevertheless, it shares many of the same objectives as other programs in work-based learning. The formal objectives are to:

Table 1.    Item structure of the Work Experience Questionnaire

**Clear goals**
- It has always been easy to know the standard of work expected of me in this work placement.
- I usually have a clear idea of what I am doing and where I am going.
- It is often hard to discover what is wanted in this placement.

**Support for learning**
- I'm motivated to do my best work in this workplace.
- I'm given plenty of feedback on my work.
- In this placement I'm given helpful feedback on how I am going.
- My academic supervisor is extremely supportive.
- My work-based supervisor tries to make the work experience interesting.

**Generic skills**
- The work placement has developed my ability to solve problems.
- The work experience has sharpened my analytical skills.
- This work placement has helped me to develop my ability to work as a team member.
- As a result of this work placement, I feel confident about tackling unfamiliar work-based problems.
- In this placement I am helped to develop the ability to plan and organise my day-to-day work.

**Menial tasks**
- In this placement I'm seen as an extra pair of hands rather than as a developing professional.
- I'm used as cheap labour in this placement.
- I'm asked to do too many things that involve no thought.

**Overall satisfaction item**

**Items not used in any of the sub–scales**
- The workload in this placement was too heavy.
- This work experience has improved my skills in written communication.
- I was generally given enough time to understand the things I had to learn to do.
- The people there made a real effort to understand any difficulties that I was having with my work.
- There was a lot of pressure on me to perform well in this placement.
- The sheer volume of work to be got through in this placement meant I often did not understand what I was doing.
- It was clear right from the start what was expected from me there.

**Additional generic skills questions**
To what extent do you feel that you have developed each of the following attributes suitable to the work-based placement?
- A willingness to learn
- Oral communication skills
- Flexibility and adaptability
- Self-confidence
- Independent judgement
- Ability to be creative
- Skills to implement change
- Professional rigour
- A desire to continue learning in the future

- enable students to augment and develop the planning skills and knowledge acquired in their academic training;
- provide students with a workplace learning experience under the supervision of a suitably qualified professional;
- enable students to develop in and further benefit from their academic experience through the incorporation of an integral work experience component;
- encourage reflective planning practice;
- enable students to evaluate and reflect on their professional planning experience in the light of their academic experience;
- encourage students to reflect on ways in which the quality of planning in practice may be improved;
- assist students to develop workplace and job search skills;
- enable students to share their experiences and observations with other students; and
- facilitate the maintenance of the close relationship between professional planning practice and the university.

Work experience is usually taken on a financial year basis after five semesters (2.5 years) of academic study with students returning to campus for three semesters to complete their degree. Work placements are sought competitively against their peers and applicants from other universities. Opportunities arise primarily with local councils, State government agencies and, increasingly, private planning consultancies. Many of these paid positions are ongoing, whereas some come and go with the vicissitudes of funding and work available; all opportunities are communicated to students. An average of nearly 40 students has had to be placed annually over the past 5 years.

The expectation is that students will undertake work commensurate to their abilities but of a diverse nature, growing in complexity and responsibility through their placement. The exact extent of supervision will depend on assessments of student capability, duration of employment in the workplace, the complexity of the work involved and specific workplace cultures. University administration involves a day-long orientation to general workplace protocols, including presentations from selected employers, coordination of placements, detailed course documentation available on-line, assessment of detailed work diaries and supervisor reports, a mid-placement seminar for all students, and close communication with employers through feedback and group discussions.

Until recently, the work experience component within the overall planning degree had not received the critical scrutiny warranted given its significance. It has become an established fixture of the employment–education nexus in the marketplace and graduates have always been highly employable because of their early exposure to the 'real world'. A closer vetting of educational objectives and learning outcomes was prompted by a major degree review in 2001–2002 (Freestone, 2003). This inevitably involved a significant focus on work experience as the most unique work-based learning component of the degree. Inputs were invited from

stakeholders inside and outside the university, with a strong case emerging to better integrate work experience into the overall undergraduate curriculum rather than have it standing apart as just a rite of passage (Freestone *et al.*, 2004). To gauge student opinion in a less anecdotal way than has been done previously, two studies were set in motion: (i) a longitudinal qualitative study of perceptions (Freestone *et al.*, 2006); and (ii) the complementary quantitative analysis reported below.

## Survey method

The questionnaire was prepared, administered and processed in a partnership between the Urban Planning Program and the University's general unit for institutional analysis and reporting. The item order and structure of the administered questionnaire came directly from Martin's (1997) exposition. The wording of some questions was slightly modified to past tense to refer to a completed experience. To maximise the thoughtfulness of responses, the 24 core questions were not grouped according to their contribution to the four main scales, but these are reinstated here to aid comprehension of the results (Table 2). Also, for ease of interpretation, in Table 2 items 4, 11, 12, 15, 18, 20 and 22 are rephrased such that agreement equates to a positive statement consistent with all other items (*cf.* Table 1).

The questionnaire was administered in September 2004 to a group of undergraduate planning students comprising the majority of fourth-year students who had completed their 'year out' most recently. The group comprised 29 from a possible total of 39, fairly equally split between males and females. Approximately 40% had worked with suburban local authorities, with the balance in State government agencies and private planning consultants.

The survey was completed anonymously in a classroom setting approximately 3 months after students had returned to University. Neither student nor specific work placement details were revealed. Students are regularly obliged to participate in course and teaching evaluations as part of the university's quality assurance measures. The completed questionnaires were submitted in the conventional way for processing to the University's educational testing centre. These data were then analysed by the University's analysis and reporting office.

## Findings

This reporting of findings draws on an internal report produced by the University analysis and reporting office. Although the number of completed questionnaires was small, the results are considered statistically robust. This summary description is organised into responses to both individual and scaled questions. Satisfaction ratings are summarised below as the sum of ratings 4 (agree) and 5 (strongly agree).

*Individual item scores*

Table 2 provides a detailed matrix of responses to all questions. Satisfaction ratings above 70% were recorded for 11 individual questions. The highest level of satisfaction was recorded for item 2, 'The work placement has developed my ability to solve problems' (86%). This item is from the core Generic Skills Scale. Very high satisfaction was also indicated for item 10, 'This work experience has improved my skills in written communication' (83%). This item was not included in any of the scales.

Low levels of agreement were recorded for items 30 and 31 from the Generic Skills Scale on developing the ability to be creative and the skills to implement change, respectively (both 31%). Low scores were also recorded for item 1 from the Clear Goals Scale—'It was always easy to know the standard of work expected of me in this work placement' (38%) and Item 23, 'It was clear right from the start what was expected from me there' (35%). Despite these somewhat ambivalent responses, item 20 recorded that students did not experience undue pressure to perform well in the placement (31%).

*Scale scores*

Table 3 shows ratings on the main underlying scales within the questionnaire. Only 51% of students, on average, provided favourable ratings on the three items that make up the Clear Goals Scale. Another way of looking at this result is that nearly half of the respondents had neutral or unfavourable views on the provision of clear goals and standards in the work placement. The item in this scale with which students indicated least agreement was item 1, which relates to expectations about the standard of work required.

The satisfaction rating on support for learning was moderate to high at 60%. This scale measures the extent to which students felt they received good support and helpful feedback, and whether they felt their experience in the work placement was motivating and interesting.

Satisfaction with the opportunities to develop or improve generic skills in the work placement was moderately high, with 69% agreement on the core generic skills items and 59% agreement on the additional generic skills/attributes items (questions 25–33). Higher scores were given by students on the core scale relating to the development of skills in problem solving, analysis, planning and teamwork. Somewhat lower scores were given in the additional scale relating to the development of oral communication skills, flexibility, confidence, creativity, and desire to learn and continue learning in the future.

Students, in general, did not feel strongly that their work experience had been menial, with an average of 63% disagreeing that they were used as cheap labour, asked to do things that involved no thought or treated just as an extra pair of hands.

Students expressed a generally high level of overall satisfaction with the work placement. A total of 76% agreed or strongly agreed that 'Overall, I was satisfied with the quality of this placement'.

Table 2.   Work Experience Questionnaire Individual item scores for urban planning students, September 2004, percentage results (%)

| Scale | Item (and item number) | 1 (min.) | 2 | 3 | 4 | 5 (max.) |
|---|---|---|---|---|---|---|
| Clear goals | It was always easy to know the standard of work expected of me in this work placement (1) | 0.0 | 27.6 | 34.5 | 24.1 | 13.8 |
| | I usually had a clear idea of what I was doing and where I was going in this work placement (6) | 3.4 | 6.9 | 34.5 | 34.5 | 20.7 |
| | It was not hard to discover what was wanted in this placement (12) | 0.0 | 3.4 | 37.9 | 41.4 | 17.2 |
| Learning support | I was motivated to do my best work in this workplace (3) | 6.9 | 10.3 | 10.3 | 44.8 | 27.6 |
| | I was given plenty of feedback on my work (7) | 6.9 | 20.7 | 27.6 | 27.6 | 17.2 |
| | In this placement I was given helpful feedback on how I was going (16) | 0.0 | 17.2 | 27.6 | 44.8 | 10.3 |
| | My academic supervisor was extremely supportive (17) | 6.9 | 3.4 | 41.4 | 31.0 | 17.2 |
| | My work-based supervisor tried to make the work experience interesting (19) | 6.9 | 0.0 | 13.8 | 51.7 | 27.6 |
| Menial tasks | In this placement I was not seen as an extra pair of hands but as a developing professional (11) | 10.3 | 3.4 | 37.9 | 20.7 | 27.6 |
| | I was not used as cheap labour in this placement (15) | 3.4 | 10.3 | 13.8 | 41.4 | 31.0 |
| | I was not asked to do too many things that involved no thought (18) | 6.9 | 10.3 | 13.8 | 44.8 | 24.1 |
| Generic skills | The work placement has developed my ability to solve problems (2) | 0.0 | 3.4 | 10.3 | 55.2 | 31.0 |
| | The work experience has sharpened my analytical skills (5) | 0.0 | 3.4 | 27.6 | 41.4 | 27.6 |
| | This work placement has helped me to develop my ability to work as a team member (8) | 0.0 | 6.9 | 27.6 | 20.7 | 44.8 |
| | As a result of this work placement, I feel confident about tackling unfamiliar work-based problems (9) | 0.0 | 6.9 | 20.7 | 48.3 | 24.1 |
| | In this placement I was helped to develop the ability to plan and organise my day-to-day work (21) | 0.0 | 6.9 | 41.4 | 37.9 | 13.8 |
| Overall satisfaction | Overall, I was satisfied with the quality of this placement (24) | 3.4 | 13.8 | 6.9 | 34.5 | 41.4 |
| Individual questions | The workload in this placement was not too heavy (4) | 0.0 | 24.1 | 34.5 | 24.1 | 17.2 |
| | This work experience has improved my skills in written communication (10) | 3.4 | 3.4 | 10.3 | 55.2 | 27.6 |
| | I was generally given enough time to understand the things I had to learn to do (13) | 3.4 | 13.8 | 13.8 | 51.7 | 17.2 |
| | The people there made a real effort to understand any difficulties that I was having with my work (14) | 3.4 | 6.9 | 13.8 | 48.3 | 27.6 |

Table 2.  *(continued)*

| Scale | Item (and item number) | 1 (min.) | 2 | 3 | 4 | 5 (max.) |
|---|---|---|---|---|---|---|
| | There was not a lot of pressure on me to perform well in this placement (20) | 3.4 | 31.0 | 34.5 | 27.6 | 3.4 |
| | I did not feel that the sheer volume of work meant I often did not understand what I was doing (22) | 3.4 | 3.4 | 20.7 | 44.8 | 27.6 |
| | It was clear right from the start what was expected from me there (23) | 0.0 | 34.5 | 31.0 | 27.6 | 6.9 |
| Additional generic skills questions | A willingness to learn (25) | 0.0 | 3.4 | 27.6 | 51.7 | 17.2 |
| | Oral communication skills (26) | 3.4 | 3.4 | 24.1 | 41.4 | 27.6 |
| | Flexibility and adaptability (27) | 0.0 | 3.4 | 20.7 | 51.7 | 24.1 |
| | Self confidence (28) | 0.0 | 10.3 | 27.6 | 27.6 | 34.5 |
| | Independent judgement (29) | 3.4 | 6.9 | 31.0 | 34.5 | 24.1 |
| | Ability to be creative (30) | 6.9 | 13.8 | 48.3 | 17.2 | 13.8 |
| | Skills to implement change (31) | 10.3 | 17.2 | 41.4 | 17.2 | 13.8 |
| | Professional rigour (32) | 6.9 | 6.9 | 31.0 | 37.9 | 17.2 |
| | A desire to continue learning in the future (33) | 0.0 | 6.9 | 17.2 | 37.9 | 37.9 |

Notes:

1. Questions 1–24 scaled: 1 = strongly disagree to 5 = strongly agree.
2. Questions 25–33 scaled: 1 = no development to 5 = extensive development.

## Discussion

For the program under scrutiny, the most compelling finding was the overall high level of satisfaction with work placement. This corroborates the accumulation of informal soundings and further reiterates the general positive evaluation of work-based learning in planning education in Australia and overseas (Brooks *et al.*, 2002; Manns, 2003; Coiacetto, 2004).

The positive feedback in several areas underscored a viable day-to-day university–industry partnership with a clear educational rationale. There was no sense among

Table 3.  Work Experience Questionnaire Scale scores for urban planning students, September 2004

| Scale | Percentage agreement* (*n* = 29) |
|---|---|
| Clear goals | 50.6 |
| Support for learning | 60.0 |
| Generic skills | 69.0 |
| Generic skills – Additional items | 58.6 |
| Not just menial tasks | 63.2 |
| Overall satisfaction | 75.9 |

*Indicates total averaged percentages for scales 4 and 5 (strongly agree).

the students that they were being used as cheap labour (item 15), a comment sometimes made about year-long placements. Support within the workplace (items 14 & 19) and enthusiasm to work at the best of their abilities (item 3) were recorded. There were benefits in enhancement of problem-solving abilities (items 2 & 9) and improved communication skills (items 10 & 26), plus recognition nearly a year before graduation of the importance of continuing professional education (item 33).

Negative ratings clustered around the potential for students to be left in the dark; for example, not always knowing what standard of work was expected (items 1 & 23), lacking feedback on performance (item 7), and with work assignments that constrained their creative abilities (item 30) and desire to effect positive social change (item 31). On the one hand, these ratings might point to undergraduate innocents adrift in a ruthlessly hierarchical work environment. At another, it might be indicative of unrealistic expectations of student planners in their first real professional experience. Either interpretation needs to acknowledge that these dimensions are outside the direct control of the University. At the same time, they do suggest the need to continually prepare students, as realistically as possible, for the type and range of work they will do. Moreover, they suggest the need for ongoing liaison with employers on the aspirations of students and, perhaps, above all else, the need to ensure that students do not return with a dampened perception of the immanent creativity of working in urban planning.

Item 17 from the Support for Learning Scale ('My academic supervisor was extremely supportive') drew a lukewarm response (48%). At face value, this suggests a lack of academic support for work-based learning. Our interpretation is that it reflects the keenness of students to fully integrate into the workplace during their work experience and minimise contacts with the University. On closer scrutiny, the high '3' rating to this question (41%) denotes a predominantly 'neutral' response. The issue arising here is a need for an alternative question to better tap the realities of academic supervision within a particular work-based learning arrangement. In this case, they might be:

- 'I felt confident that if I needed assistance, my academic supervisor would be extremely supportive'; or
- 'If I needed to contact my academic supervisor, they were extremely supportive'.

Other additional questions can be suggested from this analysis. The WEQ in its standard form (Martin, 1997) provides no direct feedback on other aspects of the work experience 'package' of specific interest to the Program, notably the commencement of learning with pre-placement preparation, assistance with the process of placement, and post-placement completion of reporting requirements.

The drift in the more neutral–negative responses uncovered by this application of the WEQ points to a need for more active engagement with employers; in particular, the importance of continuing to explore appropriate strategies for closer collaboration on learning needs and experience, as well as alerting employers to the sensitivity of supervisor–mentor relationships. The planning program is already committed to sharing general written feedback from students with employers and has organised

regular feedback sessions since 2001. It is also investigating possible assistance from the University's learning and teaching unit to further explore the 'teaching' role of workplace supervisors. This is a key function and research has shown that a mix of 'teacher attributes' in individuals will improve learning (King, 2001). Effective monitoring of students while away from university is an enduring issue in work-based education with a need to get the right balance between university objectives, employer needs and student expectations (Lupton, 1972). Visits by staff to work-places have been mooted but student feedback from complementary qualitative surveys remains virtually unanimous in its opposition to workplace visitations (Freestone *et al.*, 2004).

## Conclusion

Work-based learning directly confronts the interface of theory and practice in tertiary education and it is important that management arrangements are closely monitored. Akin to a course evaluation survey, the WEQ is a survey questionnaire that is intended to measure the extent to which students who complete a work placement as a component of degree requirements are satisfied with their experience. Application of the instrument is straightforward and requires no complex calculations. At the same time, it is grounded in the extensive research into learning and teaching that also underpins the more broadly based CEQ. The CEQ has evolved to tap the fullest appreciation of the student's academic learning experiences. The WEQ is comple-mentary in directly targeting a component of professional degrees not addressed by the more broadly-based CEQ.

In planning education in which exposure to real-world constraints, opportunities, policies and regulations is mandatory, work-based learning occupies a crucial niche in the student experience. Of the battery of assessment methodologies available, the WEQ appears to constitute one valid survey instrument. The interpretation of results needs to be related to the particular structure and context of an educational program and must be aligned with any other survey evidence, such as qualitative assessments that permit finer nuances to be teased out, as well as possibly uncovering deeper or more individualistic concerns addressed obliquely by the scaling basis of the WEQ.

Nevertheless, in its own right, the WEQ yields detailed results capable of meaning-ful pedagogic interpretation and suggesting issues for closer scrutiny and consider-ation. For the degree reviewed in this paper, the findings help highlight issues about the variability of the industry experience and the need to build and sustain closer academic partnerships without an intrusiveness that would negate exposure to the highs and lows of the workplace. The WEQ is more than the 'undeveloped instru-ment' that Martin (1997) outlines. The perceived need to rephrase reporting of results for ease and consistency of interpretation does flag the desirability of fine-tuning the items, as do some high neutral results. This pioneering application to urban planning also indicates the need for (and the ability of) the WEQ to accommo-date alternative or additional individual or scale questions to best address the infor-mation needs of particular contexts.

In short, the WEQ provides a basic survey instrument capable of generating detailed data. It is a useful quantitative tool as it stands for discussion with students and employers, although its utility is also enhanced by access to other survey information. It provides data of direct use to the ongoing missions of better industry collaboration, strategic planning and operational management to improve student learning. Its value is heightened with the prospect of replication over successive student cohorts to develop a more synoptic and longitudinal appreciation of trends and issues.

## Acknowledgements

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