



Scholarly Practice in Work-based Learning: fitting the glass slipper

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ABSTRACT Though often of low status in universities, work-based learning is widespread and is popular with governments, students and industry. The challenge is to extend scholarly approaches to making it efficient and effective. Three ideal types of current practice in WBL are outlined, five challenges to the extension of scholarly practice in WBL are discussed, and some examples of emerging scholarly practice are given.

Introduction

Work-based learning (WBL) has a long history in higher education, is popular with students and highly regarded by graduates, and is strongly supported by industry and governments. In the last decade, following the publication of Boyer's *Scholarship Reconsidered*, the idea of scholarship in teaching has become popular with academics and university leaders. This article focuses on the intersection of these two movements, asking: What challenges are encountered in extending scholarly practice in WBL? The extent and character of WBL are outlined, a view of scholarship in teaching is advanced, challenges to adopting scholarly practice in WBL are discussed, examples of how those challenges have been addressed are briefly given and a position on the way forward is presented.

WBL is defined here as student learning for credit designed to occur either in the workplace or in on-campus settings that emulate key aspects of the workplace. Work placements, cooperative education years and practicums are examples of the former, while simulations, industry R&D projects and campus-based business enterprises are examples of the latter.

Current Practice

Cooperative education in the United States has a history approaching a century, and some 200,000 students participate each year (NCCE, 1998). Martin (1998) estimates that 60% of Australian university courses include some form of learning in the workplace. Jancauskas, Atchison, Murphy, and Rose (1999) report that 20 of Australia's universities offer cooperative education (including CEED¹), involving 10,000 students, over 3,000 employers, and student earnings in excess of \$60 million. Foster and Stephenson (1998) calculate that as many as a quarter of a

million students in the United Kingdom will undergo some kind of placement in any one year. Influential voices such as Dearing in higher education policy have proposed that workplace experience should be extended to all courses (NCIHE, 1997; ACNielsen Research Services, 1998).

Students report the experience to be rewarding because the problems are real and others will use what they produce (Candy, Crebert, & O'Leary, 1994; Crebert, 1995). Graduate surveys of teachers, media professionals and social workers have shown them to believe they learned more from their work placement than from their classes (ACE, 1999, p. 35; Ciofalo, 1992; Clare, 1999).

There are not enough data to make definitive judgements about the scholarly character of WBL but some types of trends in practice may be identified. Significantly, though, WBL has only recently become a focus of student learning research.

Although there are many studies indicating that work-based education is effective in developing competent and professional graduates, it is unclear how much and what aspects of these programs contribute effectively to this end. ... there is still no set of clear guidelines on how to maximise the effectiveness and efficiency of these programs. (Martin, 1996)

Bailey, Hughes, and Barr point out that we do not yet have good conceptions or measures of internship quality and, in a survey of five WBL programs, found that, on average, interns spent only 14% of their time learning as opposed to working (Bailey et al., 1998). While there is research on the outcomes of cooperative education, broader forms of work-based learning have not been fully evaluated (Stasz & Stern, 1998). Where evaluations have been undertaken, the results are mixed and methods do not often control for key variables or use comparative samples.

A review of the literature and of practice at the author's university suggests that three ideal types of practice in WBL (Weber, 1964) can be constructed: WBL as habit, as cargo cult, and as Cinderella. This is explained further, below.

The traditional approach to implementing WBL has been *laissez-faire*. Students find or are found a placement. Their learning is not regarded as problematic (Martin, 1996) and is left to the contingencies of their situations. Little attention is paid to the understanding that participants have of the process, and the role of university staff is primarily organisational and trouble-shooting. The implicit theory of learning is that students can, and do, first acquire knowledge and skills in classroom settings and then learn to apply them in practice (Schön, 1995; Dall'Alba & Sandberg, 1996). Evaluation, if it occurs, is of the consumer satisfaction survey type; thus, WBL as habit. This may be bolstered by professional registration requirements for minimum hours of practice and by positive student reactions.

A second and related type of practice is WBL as cargo cult. Despite the shortage of measures of quality and of good data on learning effectiveness, influential voices have stressed its importance and/or called for more of it. Harvey, Moon, and Geall (1997) called for year-long placements for all English higher education students, a proposal quoted by Dearing in recommending an expansion of work experience

(NCIHE, 1997, Ch. 8; cf. also ACNielsen, 1998; Bragg, Hamm, & Trinkle, 1995; Downing, 1998). Over-optimism about WBL is particularly evident in the marketing efforts of many colleges and universities. This appears especially in North America, with impact on graduate career opportunities, quality of the student educational experience, and opportunity to establish relationships with industry figuring strongly in the motives given by college presidents (NCIHE, 1997, Table 8.4).

Despite optimism about its potential for graduating students, WBL remains the poor relation of the curriculum, if measured by the returns to its academic coordinators. The coordinators report being under-resourced, overloaded, undervalued or isolated (Orrell, Cooper, & Jones, 1999; cf. also Harvey, 1999; Atchison, Pollock, Reeders, & Rizzetti, 1999). Not sharing in the status of theoretical knowledge, proponents of WBL have had to struggle for resources (Ciofalo, 1992). In the United Kingdom, from 1995 to 1997, there have been significant reductions in the proportion of undergraduate students undertaking sandwich courses, as enrolments in them have not grown at the same rate as overall enrolments (Harvey, 1999).

Habit and cargo cult are the main forms of WBL historically, but improvement efforts through the 1990s mean that we may soon see it as the Cinderella of the curriculum. These improvements can be seen as initiatives in scholarly practice and will be discussed below. First, the issue of scholarly teaching practice in general is elaborated, and then the distinctive challenges in implementing it in WBL are discussed.

What is Scholarship in Teaching?

The idea of scholarship in teaching, though enthusiastically adopted in universities, has proved a slippery one to grasp and to apply. Boyer (1990) suggested that it would have the same kinds of products as the scholarship of discovery: textbooks, articles, conference papers, and innovative teaching materials as well.

Subsequently, writers have focused on scholarly processes as well as products. Kreber (1999) argues that such processes include reflection on curriculum, instruction and pedagogy at the levels of course premises or rationale, process and content. In a study of award-winning teachers Kreber (2000) found that learning about teaching was seen to be intertwined with learning about the discipline through peer interaction.

Hutchings and Shulman (1999) see scholarly teaching as beginning with excellent teaching, and extending first to gathering evidence about one's teaching, drawing on current ideas about teaching, inviting peer collaboration and review, then to going public with one's work to allow others to critique and build on it, and finally to framing this as ongoing inquiry into student learning. Clearly this is a large task, as Hutchings and Shulman recognise, and it involves the other scholarships as well, the scholarships of discovery, integration and application. Discovery has two aspects in this context: teachers undertaking applied research on their own practice, and examining the findings of student learning research in order to reconceptualise or improve their practice. In organisational terms, scholarly teaching practice may be

pursued by the individual, a team or institution-wide. It may be more or less inclusive in relation to involving students, practitioners and industry players.

Trigwell, Martin, Benjamin, and Prosser (1998) propose a three-dimensional model: communication (from none to international), reflection (from none to focused), and being informed (from informal theories to action research).

Teachers who are engaging in the scholarship of teaching seek to understand teaching by consulting the literature on teaching and learning, by investigating their own teaching, by reflecting on their teaching from the perspective of their intention in teaching, and by formally communicating their ideas and practice to peers. (Trigwell et al., 1998)

From the discussion above, the following characteristics of a scholarly approach can be extracted. Scholarship is:

- purposeful in being directed to clear goals for student learning;
- informed by published research;
- framed by a theory of learning;
- evidence-based, using data from participants;
- public, in that it puts accounts and new insights into the public domain; and
- reflective, in that reflection is the warp for the weft of the five dimensions above.

The image evoked by these points is of academics reading, gathering data, reflecting, working together and contributing to each other's learning. How transferable are these practices to WBL?

Pursuing Scholarly Practice in WBL

While in principle scholarly WBL will exhibit the same attention to purposeful design, informed implementation, responsible evaluation and public spirit, there are several distinctive characteristics about the nature of WBL and about its context that make scholarly practice particularly challenging. First, given that the common experience of staff is that WBL is marginal and under-resourced, we must address the question of how to make scholarly practice *cost effective*. Second, WBL utilises a wide variety of settings for learning and shows a higher degree of unpredictability than campus settings. Much workplace learning by students is informal and affected by local contingencies, and much informal learning is implicit and bound to the context in which it occurs (Hager, 1997). What is an achievable scope in goal setting? How is learning to be articulated, assessed, and evaluated? This is an issue of *control*. Third, WBL is of necessity a more collaborative practice involving a wider range of players than class-based learning. This is an issue of *collaboration* across occupational and organisational boundaries. Fourth, there is an issue of *capacity*: as we become more purposeful in trying to structure or emulate the workplace as a site for learning, how do we address the match between learner needs and the educative potential of the workplace? Fifth, respecting what learners bring with them, and matching our means to our goals, requires us to address the *customisation* of WBL strategies.

Cost Effectiveness

How can we make scholarly WBL feasible? I take this issue first, given the presumption of expecting more from already busy staff. Short of a teaching development grant, there is no silver bullet to lay this issue to rest.

In Australia, in the case of the sandwich or industry year or semester, there is already an income problem inasmuch as for each such student, the university receives 20% of an EFTSU funding. This has been estimated by Hughes (1993), in the case of an IT course, to be well below the costs involved.

The question arises as to how much of an extra investment of time in scholarly practice is needed, and what the pay-off will be in terms of better outcomes for students and satisfaction for staff. In addition, we can look at existing and possible efficiencies in managing WBL. Taking the cost side first, as with all teaching, inputs are varied and often intangible, and it is difficult to estimate their costs accurately. In general, however, we can say that, as with producing distance learning materials, there will be an initial up-front development cost but lower continuing costs. We might expect scholarly practice to lead to fewer errors, as decisions are increasingly informed by evidence, and we might expect shorter development timelines in new programs or with new practitioners. We can expect to externalise some of the costs of teaching if we enable students to better direct and manage their own learning with less dependence on staff inputs, whether the setting is the workplace, a community setting, the library, the peer group or a virtual classroom.

Returns to staff from scholarly practice need careful identification as well. For some staff, already, the research outputs from scholarly practice have been used to help meet research and career development goals. Evidence-based practice has, for some, had the happy result of reducing the distance between the academic as researcher and the academic as teacher/administrator. Another return is the satisfaction of more effective programs and the pleasure of seeing students blossom. Finally, scholarly practice may well reduce the undervaluing of WBL within academic culture.

Control

Scholarly practice will also recognise the *limits* to planning, and indeed see them as integral to the value of workplace learning. As noted above, Ashworth and Saxton (1992) identify some of its irreducible uncertainties: the tensions between learning and producing, and between fitting into the culture of work and keeping some reflective distance from it. The needs and capacities of students vary, as do those of supervisors and mentors, and not all workplace cultures are amendable to learning in the same degree. These contingencies pose real challenges for fair assessment of student achievement.

WBL is to classroom learning as the Wild West was to suburban Philadelphia.² An open land, a place of opportunities more felt than known, whose traverse can be helped but not guaranteed by prudent preparation, WBL remains a strategy that is unpredictable but at its best highly engaging. While planning for the experience as

if it were curriculum like any other is important, the very fact that it is a place of risk should be celebrated. Classroom experience has a tendency to become too safe, bloodless and narcotic in its abstraction from life.

The forms that learning takes in the workplace can be very different from those in the academy and these differences should inform planning (cf. Candy et al., 1994). There are vague briefs, complex politics, uncertain knowledge, short timelines, sketchy feedback, overlapping or unclear roles, and oral presentation of results. Preparing students for the experience means helping them to learn and to manage their learning in new ways. Like the Wild West, the workplace is also often unpleasant or destructive (Keay & Lee, 1998; Hughes, 1998) and should not be romanticised.

Collaboration

Scholarly practice in workplace learning faces the challenge of discovering and aligning the goals of multiple players. In addition to academics, students and administrative staff, there are professional or industry interests and approaches, and at the level of individual employers there are the interests and approaches of immediate supervisors, managers and human resources staff. How important is the learning of students to workplace supervisors? Who is evaluation to be for and what will it cover? Are all equally committed to scholarly values? Are all equally resourced to reflect them? Do all agree on what is to be communicated and to whom? Moving to scholarly practice involves significant complexity. Negotiation must yield sufficient agreement on approaches, rationales, purposes, methods, evaluations and “going public”, for trust to be established and joint action to occur. This involves addressing intrinsic tensions for the student, such as tensions between learning and working, staying detached and critical vs. “going native”, and taking risks and accepting mistakes vs. building a work record to impress (Ashworth & Saxton, 1992).

Clearly, where university, student and employer goals for learning do not match, the program is unlikely to be productive. Where academics are driven by a concern with student learning but employers offer internships in order to get extra pairs of hands, learning outcomes are likely to be limited.

Capacity

The capacity of settings to contribute to particular goals must be assessed in a scholarly approach. Variables include the existing competence and confidence of students, the demands of the tasks they do, the degree of access that they have to organisational and professional knowledge, and the facilitative capacity of workplace mentors or supervisors. Some academic coordinators of WBL have the luxury of a range of workplaces and work settings to choose from or sufficient resources to emulate key aspects of them. How are they to make their choices?

Customisation

Implied in the issue of capacity is the issue of customising WBL firstly to respect and draw upon the life experience of students and secondly to devise strategies that are mostly likely to achieve joint goals.

Firstly, most of our students already have experience in the workplace, with previous or current part-time work being common among undergraduates, and many mature-age students having extensive experience of full-time work, sometimes in the field in which they are studying. This means, depending on the goals we have for the program, that we may not need to provide further work experience for them. We could, alternatively, offer them opportunities to reflect on those experiences from new perspectives. In terms of extent or timing decisions, we should select strategies according to the needs and work history of students. At the simplest level, this may involve providing, for example, longer and full-time blocks for school leavers and shorter or more flexible experiences for older students. Ultimately, we should recognise that most students have been work-based learners of some sort, and to some degree, before they come into our sphere of influence. Thus, some inquiry is called for, in order to reveal their approach to more WBL.

Secondly, given increased competition for work placements among tertiary providers and the cost-intensive character of building and maintaining industry networks to ensure their continued supply, what is the scope for emulating key aspects of the workplace in on-campus settings? Can this also address the issue of control?

Emerging Scholarly Practice in WBL

In this section, some examples of improvement in WBL that display aspects of scholarship are outlined. These examples illustrate attempts to map practice, evaluate practice, define good practice, implement good practice, and share findings, or some combination of these classifications.

Sharing Findings

There is a literature on how to organise and exploit work placements and most of it is discipline specific. Much of it is normative in character and not informed by student learning research. Reviews of research on workplace learning, whether of students or of employees, have found that more gaps remain than have been filled (Boud, 1998).

One project from the student learning research corpus is Martin's (1996) evaluation of a number of work-based learning programs. Martin found that establishing clear goals and providing support for student learning were likely to be associated with student satisfaction and development of generic skills. This study provided practitioners with a version of the Course Experience Questionnaire adapted for use with work placements. Others within this tradition are Keay and Lee (1998) and Trigwell and Reid (1998).

Other scholarly activities on this dimension have included a special issue of *Higher Education Research & Development* devoted to work-based learning in 1998; the Flinders Practicum Colloquium in 1999; and regular field education conferences in Social Work in Australia. In the United Kingdom, the push for more work experience in the curriculum has led to a number of funded projects, a centre and a conference. In the United States, the School-to-Work initiative and the influential Cooperative Education movement are associated with university centres, journals and other publications, development projects and applied research projects.

Collaboration in Clarifying and Aligning Goals

The challenge here is to ensure that participants' goals are firstly clear and secondly congruent. Where programs have been left to run as a habit, a first step in scholarly renewal is to clarify academic goals for it. Miller, Watts, and Jamieson (1991) provide a useful list of goals:

Enhancing. To enable students to deepen their understanding of concepts learned in classroom settings, and to apply skills learned in such settings.

Motivational. To make the curriculum more meaningful and significant to students and thus improve their academic performance.

Maturational. To facilitate students' personal and social development.

Investigative. To enable students to develop their knowledge and understanding of the world of work.

Expansive. To broaden the range of occupations, specialisations or industry sectors that students are prepared to consider in terms of their personal and career planning.

Sampling. To enable students to test their vocational preference before committing themselves further to it.

Preparatory. To help students acquire skills and knowledge in a particular occupation or specialisation which they will be able to use if they aim to enter employment in that area.

Anticipatory. To enable students to experience some of the strains of work so that they will be able to manage the transition to work more comfortably.

Placing. To enable students to establish a relationship with a particular employer which may lead to an offer of a full-time job.

Custodial. To transfer some of the responsibility for particular students for a period.

Another goal might be described as *professionalising*: to develop an understanding of what it is to practise as a competent professional (Dall'Alba & Sandberg, 1996).

Employer or supervisor goals may include philanthropy, gaining extra pairs of hands, screening prospective recruits, influencing training outcomes, gaining up-to-date knowledge and stimulating reflection (Crebert, 1995; Cunningham, 1997; Foster & Stephenson, 1998; Bailey, Hughes, & Barr, 1998).

On the question of congruence, Keay and Lee (1998) researched a group of

students' expectations of their internship and found that a good placement was seen to be a safe or predictable one. This is likely to be at odds with the personal risks that need to be taken in learning in the workplace. Examining student conceptions of two workplace-based training programs, Trigwell and Reid (1998) found a range of purposes, not all of which were congruent with staff expectations.

One example of a strategy to align goals and plans is to be found in one of the successful programs evaluated by Martin (1996). This program in Medical Laboratory Science involved providing the workplace supervisor with the list of industry-specified professional competencies and requiring the supervisor to devise and negotiate with the student a program of experiences that would lead to their development. This then also provided the assessment framework.

In Social Work, there are cases of collaborative work in defining a fieldwork curriculum with industry agencies (cf. Clare, 1999).

Control, Capacity and Customisation

Efforts in response to these challenges have focused on: enhancing the capacity of students to manage their own learning; preparing students and workplace staff for their roles; maximising learning through reflection; and diversifying modes of work-based learning.

Preparing students to manage their own learning was found to be a key contributor to the success of a program of library studies internships. Students evaluate what they have to bring to an internship, identify what they wish to get from it, negotiate that with the workplace mentor, and also undertake self- and career exploration (Alderman & Milne, 1998). As budget cuts have reduced the number of staff visits to workplaces, there has been increased interest in the potential of workplace supervisors to facilitate learning (Webber, 1999). There has been work on clarifying the roles of supervisors (Ashworth & Saxton, 1992), and developing training programs and resources for supervisors in cooperative education programs (e.g., Jancauskas et al., 1999), for fieldwork supervisors in social work (Clare, 1999), and for mentors in teacher education (e.g., Ballantyne, Green, Yarrow, & Millwater, 1997). There has been work on the difficult issues in assessment: what is to be assessed, by whom, and whether individual assessments are comparable (e.g., Ashworth & Saxton, 1992; Cooper, 1999). Maximising workplace learning has been pursued with a variety of strategies for reflection, and training. Materials to develop the art of "learning conversations" have been produced (Gowing, 1998).

In relation to the issue of capacity, the organisation of the workplace and the characteristics of its knowledge base have been analysed by Hughes and Moore (1999) (Table 1). Work tasks should be structured to provide a challenge that can be met.

These dimensions, when matched with the characteristics of the learner, yield a learning outcome scale that can be roughly plotted as in Figure 1.

A third dimension could be plotted for mechanisms that effectively support reflection.

Where placements have proved costly and difficult to find, support and evaluate,

TABLE 1. Workplace factors that help to determine the potential for learning. Adapted from Hughes and Moore (1999, pp. 14–15)

	More learning	Less learning
Socio-cognitive demands	The intern's tasks require knowledge and skill	The intern's tasks are not challenging
Social-interactional demands	The intern has heavy contact with Others of varying status and roles	The intern has little contact with others
Pragmatics	The intern's tasks are important to the organisation	The intern's tasks are peripheral to the organisation
Classification	Weak: less division of workplace knowledge	Strong: workplace knowledge is highly segmented
Frame	Weak: access to the knowledge of the workplace is not controlled	Strong: access is highly controlled
Social organisation	Workplace roles are not highly segmented or hierarchical	Workplace roles are highly segmented and hierarchical
Workplace culture	Workers believe in collaboration and learning	Workers are status-oriented and competitive, and the intern is given low status
Production process	Less division of labour; work teams are used	High division of labour

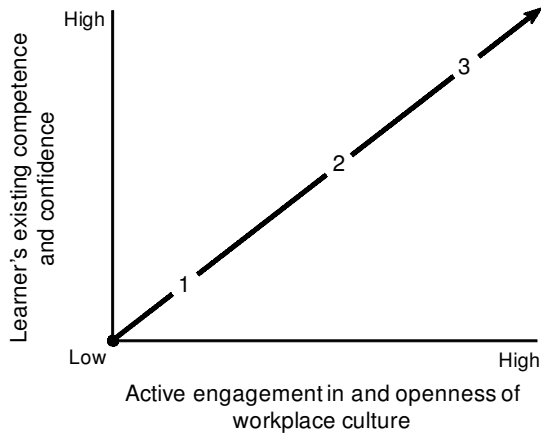


FIG. 1. Potential for work-based learning.

then different modes of work-based learning have been developed. Practice clinics, project learning, problem-based learning, games, role-plays and simulations have been designed to provide learning experiences in work-like settings. For example, in Australia, there is a virtual economy of practice firms in which students set up and run, or are recruited into, a simulated business to prepare them for working in a real business environment. Specific vocational skill development is targeted and generic skills can also be developed. Students operate with support from an educator/facilitator and a real business (Atchison et al., 1999). This approach has the potential to reduce or to eliminate those aspects of WBL that are not essential to achieving pre-defined learning objectives and to better support risk taking and guided reflection on the part of learners.

Cost Effectiveness

Only a little can be reported on attempts to respond to this challenge. For staff, common ways of reducing inputs have been to transfer locating and negotiating placements to students, reduce workplace visits, use student peer groups or journal writing to support reflection, use workplace supervisors as assessors, and to rely on indirect evidence of performance for assessment. Not all of these attempts have been framed in a scholarly fashion, however.

There have been some “silver bullet” solutions in the form of special funding for scholarly improvement: five of the initiatives reported in this paper received support from the Australian Committee for University Teaching and Staff Development, or its predecessor.

If Hughes’ (1993) estimates are generally applicable to sandwich or industry years/semesters, the way forward may be to reclassify subjects as something else in order to gain full funding. This will generate opposition from students in existing programs, however, as the cost-benefit ratio works well in their favour: they pay no HECS, learn for credit, and in many cases earn a wage. Another option is for

universities to allocate funding by using different principles internally from those applied by government.

Controlling preparation costs may be pursued, for example, by preparing participants by means of resource-based learning materials as in the Flinders Practicum Project and the supervisor training project, reported in Jancauskas et al. (1999).

Work is needed on tracking costs, to ensure that externalising the costs of managing learning on placements to students and workplace supervisors or mentors is not outweighed by the costs of preparing and supporting them to do this effectively. In the case of the program in Medical Laboratory Science noted above, the course coordinator estimates that income and costs are matched (R. Green, pers. comm.).

Institutional Approaches to Extending Scholarly Practice

At the institutional level, examples can be found at Flinders and RMIT Universities, in Australia. The Flinders University Practicum Development Project has been underway for several years and aims to improve the preparation of staff for teaching, learning, assessment and administration of practicums. It caters to academic, general and workplace staff. Workshops and modules for self-directed learning cover: management; program planning and development; legal and ethical dimensions; teaching and learning; assessment of students; evaluation of the practicum; and working with diverse student groups in non-discriminatory ways. In 1999, the Project included a colloquium on the practicum that drew participants from around Australia to discuss and review practice in a range of disciplines.³

At RMIT University, a status audit, review of international trends and reconceptualisation of work-based learning were undertaken in 1999 (Reeders, Atchison, Pollock, & Rizzetti, 1999). The term “work-integrated learning” (WIL) was adopted to encompass the increasing diversity in modes of WBL. The status audit employed a questionnaire to staff that yielded 42 returns in the HE sector. It focused, among other things, on student preparation and assessment, drivers to improvement and extension, and the distribution of responsibilities and preparation activities for them. Results were as described below.

Good practice includes appropriate preparation of students for their WIL activity, particularly when it includes spending time in a workplace. The survey found that most preparation was provided within the Department or School, although significant minorities of cases included workshops from the careers service or preparation via one of the Context Curriculum classes (RMIT’s core curriculum).

The survey revealed that assessment mostly occurred throughout the activity, with fewer than half of the programs relying only on end-of-activity assessment. Assessment undertaken by industry staff was relatively infrequent, while the extent of self- and peer assessment reported augured well for the development of lifelong learning skills.

Good practice in WIL was taken to include generic learning goals. Graduate attribute development was targeted in about three-quarters of the activities.

TABLE 2. RMIT survey: improvement drivers

	<i>N</i>
Student feedback	21
Experience and reflections of RMIT staff	19
Feedback from the industry or profession	12
Research	2
Nothing/no response	7

Note: $n = 42$; multiple responses possible.

Respondents replied to an open-ended question about what drove improvement of their WIL activity. Answers are summarised in Table 2.

Given that multiple responses were possible, the findings suggest that scholarship as embodied in evidence-based practice was present in half or more of the programs reported.

In response to a question asking what inhibits improvement, most replies referred to lack of staff time and other resources, as well as lack of industry places and facilities.

WIL activities at RMIT demonstrated a significant degree of partnership between administrative, academic and industry staff. However, as was found in the Flinders Practicum Project (Orrell et al., 1999), training provision for the varied roles in WIL was poor (Table 3).

In addressing capacity, the project researched and assessed types of WIL, including practice firms, industry-commissioned R&D projects pursued both on- and off-campus, campus-based business enterprises, customised and accredited workplace learning, supervised work experience and mentored employment. Drawing on the insights of others, the project developed good practice principles in the design, development, preparation, implementation, assessment and evaluation of supervised work experience. The following general good practice principles were derived from a literature review (Atchison et al., 1999):

TABLE 3. RMIT survey: number involved in and prepared for roles

	Admin. staff	Training provided	Academic staff	Training provided	Industry staff	Training provided
Policy formulation	9	0	25	2	0	0
Program design	6	0	24	2	3	0
Preparation of students	9	0	26	2	1	0
Sourcing of positions	13	0	18	0	0	0
Assessment	5	0	26	3	8	3
Student supervision	6	1	23	1	13	3
Student mentoring	7	0	19	0	11	2
Industry liaison	12	0	19	0	2	0
Program evaluation	7	0	22	3	5	1

1. WIL activity is integral to the curriculum and has high-level support.
2. The activity is designed to accommodate the needs of different types of learner.
3. Specific learning is targeted and assessed.
4. The experience is graded to include increasingly varied and novel tasks and problems.
5. High-quality supervision and/or mentoring is provided.
6. Learning targets are both technical/professional and generic (including career exploration, learning how to learn and generic professional skills).
7. All parties are prepared for the activity and know and understand their roles.
8. The experience develops learners' career plans and transition management skills.
9. The activity is evaluated, involving all participants.
10. The activity helps to build partnerships with enterprises, the industry and/or profession.

Conclusion

The emergence of scholarly improvement initiatives gives rise to optimism about the future of WBL, suggesting a transition from habit or cargo cult to Cinderella. Permanent translation of Cinderella to the palace will not be an easy journey, as the challenges to be met are significant. The route to be followed requires a new epistemology for universities, that of action research (Schön, 1995; Trigwell et al., 1998) and this involves new modes of generating, applying and sharing knowledge. Teaching framed within a continuing inquiry into student learning is scholarly when it is purposeful, informed, responsible, reflective and shared.

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Notes

1. Cooperative Education for Enterprise Development: research or development tasks undertaken for industry by students with support from university staff and facilities (Baumgart et al., 1994).
2. I am indebted to Lee Andresen for drawing attention to the wild character of WBL in his keynote address to the Flinders University Practicum Colloquium, November 24–26, 1999.
3. Sources: <http://adminwww.flinders.edu.au/StaffDev/Practicum.WEB/intro.htm>; Orrell et al. (1999); Lesley Cooper (pers. comm.).

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