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Putting the ‘integrated’ in work-integrated learning

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A key aspect of work-integrated learning (WIL) is the notion that it entails the integration of knowledge and skills gained in the educational institution and in the workplace. WIL educators are interested in what way students take what they learn on campus into the workplace; and conversely how what they learn in the workplace becomes related to, or incorporated into, the next phase of learning when the student returns to the campus after completing a work placement. Here we report on a major national study of the pedagogical approaches used in New Zealand WIL programs in terms of integration of student knowledge, and consider what impact these might have on student learning.

INTRODUCTION AND BACKGROUND

Work-integrated learning (WIL) is an educational strategy in which students undergo conventional academic learning within an educational institution, and combine this with some time spent in a workplace relevant to their program of study and career aims. It goes under a number of names internationally; sandwich degree (Ward & Jefferies, 2004); cooperative education (Groenewald, 2004); and internships (Sovilla & Varty, 2004; Walters, 1947). The name cooperative education reflects the tripartite nature of WIL in which the student, higher education institution (HEI), and workplace work together collaboratively to educate students (Coll, 1996). Recently the World Association for Cooperative Education added ‘integrated’ in a by-line to its name to reflect a broader perspective of the nature of cooperative education that can include capstone programs, a practicum, internships, sandwich degrees, and work-based learning via industry-projects (Franks & Blomqvist, 2004). A key aspect of WIL is the notion that it entails the integration of knowledge and skills gained in the educational institution and in the workplace. It is the integration aspect of WIL that distinguishes it from workplace learning (i.e., what a student or employee learns in the workplace, Boud & Falchikov, 2006).

A key purpose of work-integrated learning is the notion of providing graduates with a comprehensive skill set desired by potential employers. However, the literature notes that it is problematic for higher education providers to provide students with some skills, especially behavioral or so-called soft skills (Burchell, Hodges & Rainsbury, 2000; Coll & Zegwaard, 2006).
Eames (2003) notes that whilst there is a rich literature on the success of WIL programs, such research is almost entirely concerned with what he terms ‘operational outcomes’, such as benefits for students (Dressler & Keeling, 2004), employers (Braunstein & Loken, 2004), and HEIs (Weisz & Chapman, 2004). For example, it has been reported that compared with conventional graduates, students who participate in WIL programs gain employment more easily, fit in better in the workplace, advance more rapidly in their careers, and so on (Dressler & Keeling, 2004). However, there is a serious paucity of research into what WIL students learn, how they learn, whom they learn from (Eames & Bell, 2005), and how the learning might be better facilitated and supported.

The focus of the work presented here is in what way does the student take what he or she has learned into the workplace, and conversely in what way does what the student learns in the workplace become related to, or incorporated into, the next phase of academic learning when he or she returns to the HEI after completing a work-placement?

CONTEXT

The objective of this current study is to investigate which pedagogical approaches in New Zealand WIL programs are currently used by WIL practitioners (i.e., staff from HEI that run WIL programs) in terms of learning and the integration of academic-workplace learning, and to consider what impact these have on student learning. The authors of this paper are both WIL practitioners and senior researchers who are conducting the research in partnership. Together the parties investigated their respective WIL programs, and the use of pedagogical approaches within them. The context for this study comprises three important sectors of New Zealand higher education; business and management; sport management; and science and engineering, and a cohort of higher education institutions that offer WIL/cooperative education programs in these areas in a variety of ways.

METHODS

The research is interpretive in nature (Guba & Lincoln, 1994; Merriam, 1998), and two main data sources were employed; interviews with three stakeholder groups (viz., employers, students and co-op practitioners), and analyses of educational artifacts (e.g., relevant documentation course/paper outlines, assignments on reflective practice, portfolio of learning, etc.). In this study, credibility was enhanced by the use of data triangulation (Yin, 1994), which involved comparison of findings from multiple methods of data collection, and cross-case analysis, which reviews “processes and outcomes across many cases, to understand how they are qualified by local conditions, and thus develop more sophisticated descriptions and more powerful explanations” (Miles & Huberman, 1994, p. 172).

This paper provides preliminary findings from focus group interviews related to science and engineering, sport management, and business and management. The interview questions focused on pedagogies and learning that were in current use on campus and on placement, or both. The interviews were audio-taped and transcribed verbatim. The findings are presented in the form of a thematic analysis of the focus group interviews.
RESULTS AND DISCUSSION

Sport Management

According to all three stakeholder groups (i.e., recent student-graduates, supervisor-employers, and university supervisors-co-op practitioners) work-integrated learning in sport management “provides a point of difference that employers value.” The three main student learning outcomes that the placement - or practicum as it is called in sport management - provides as identified by each of the focus groups were:

- preparation in the ‘real world’;
- personal achievement; and
- networking.

The practicum is reported to change student attitudes and behaviors, with a more professional approach applied before work, which then provided a launch into the job market. The students indicated they felt they were “developed as people,” as they were able to reflect and self-assess their workplace “journey.” The practicum experiences resulted in greater self-awareness, self-confidence, self-belief, and improved task, project, and time management skills. The work-based experience also reaffirmed the value of theory learned on campus, and that university study was beneficial in terms of career preparation.

Pedagogies that practitioners reported were used on campus were lectures, practicum classes, facilitated reflection (Martin & Fleming, 2006), and interaction and reassurance from lecturers and student peers. Students perceived a need for more practice in specific work-related activities on campus (e.g., preparing budgets using Microsoft Excel; planning of projects, etc.), and more purposeful, structured reflection. Skills thought to be best learnt on campus were verbal and written communication, along with planning, project and event management. More development of soft skills was identified as a need, such as oral presentations. How an organization is structured and functions, and sport in the social context (e.g., working hours/ volunteers; difference between player/administrator; it’s not glamorous, but dynamic industry), were also identified as knowledge best gained on campus. Practitioners highlighted the importance of a “coherent course of study.”

Initial pedagogies that were used on placement followed the key steps of a human resource management process (Cuskelly & Auld, 2006) and consisted of:

- interview - CV, competitive process; and
- induction - systems, processes and policies - manual for students and supervisors.

The students said they felt they were treated as staff on practicum, with expectations of students and supervisors discussed and clearly established. A need was identified to help work place supervisors adopt more empowering management skills, and to help students take ownership of their projects earlier on in the practicum. Performance review was both informal and formal, with training being offered that provided the student with a “360 experience” of the organization. It was noted that skills, knowledge, and theory students learnt on campus also needed to be developed at the placement, along with the specifics and operations of the organization (e.g.,
specific databases). An important supervisor role identified on placement was mentoring and offering career advice.

**Science and Engineering**

In science and engineering the students felt they learned “theory” on campus and more “practical work” on placement. On-campus learning of theory was not necessarily seen negatively; indeed it was recognized that there was considerable “variety of information” able to be delivered in lectures, for example. But the practical laboratory work at university was seen as limited, whereas on placement students said they felt “like a real scientist,” and that “it was a privilege to use scientific equipment,” whereas on campus there was a perception they couldn’t be trusted with equipment in laboratory classes: “Oh don’t give that to the students they most likely to crap it out.” So the students felt that co-op programs in science and engineering were likely to help them gain useful practical skills that complemented their on-campus theoretical learning; practical skills were best learnt on placement, and theory on-campus.

There also was evidence that student participants felt they learned more than content knowledge and practical skills on placement. They also discovered that “when you are doing placement research, it don’t necessarily always work,” and were somewhat surprised to learn “the work that goes into researching and coming up with ideas.”

There was a feeling amongst the students that it was a good idea that on-campus and on-placement learning is integrated; but it seems for this cohort there are no mechanisms or persons that might make this happen. Instead any integration was ad hoc and consisted of recognizing that specific scientific knowledge (e.g., “protein assays,” and “mass and energy balances”) learnt on placement turned out to be helpful when encountering such knowledge in the next year of study on campus. So when the lecturer “went into protein assay and started explaining. I said ‘it’s alright I’ve sort of done it before’, so it helped in that way.”

Interestingly, the interaction between researcher and participant that occurred during the conduct of the interview, indicated that such integration had indeed occurred on a number of occasions, but it seems there was little recognition of this at the time: “I think a lot of students don’t realize what they take back from placement … like through this interview you sort of think oh yeah, you use that from placement, and that from uni.” However, examination of placement reports indicates that reflection and review are requirements in all placement reports for the student cohort involved. This suggests that whilst some mechanisms may be in place to facilitate integration, such pedagogies are not recognized as learning tools as such. Alternatively it may be that such an approach is focused on what is learnt on placement, and fails to place sufficient emphasis on how such learning might be utilized upon returning to campus.

**Business and Management**

On campus learning occurred via lectures and workshops and focused on “major knowledge, in all the theory,” whereas, placement learning was for students to gain “hands on experiences.” Co-op practitioners from the business management sector felt student’s learned best on campus when they had clear learning outcomes, the most
important of which was “reflective learning, reflecting on their own performance.” This was facilitated by means of workshops and guidance in the development of learning portfolios. These include things such as “weekly email journals,” and “intermittent face-to-face meetings” between practitioners (whose role was to support learning) and students on placement. So students were encouraged to “reflect on incidents that have occurred that week or an incident and describe it, analyze it and say what they might change.” A key feature of placement learning experiences was the fact that “they contextualize learning” that “depends a great deal on the placement and that person.” Skills gained on placement were “attitude,” and “self-management,” and interestingly “the value of social skills … students suddenly realizing they actually had to talk to people.”

A key feature of learning for the students in the business and management sector in this work was the use of portfolios and in particular a requirement for students to accumulate and justify the learning. A key feature is the notion of “reflective journals … trying to encourage that lifelong analysis.” It was this tool that was seen as the main way we might help student to integrate their knowledge gained from on campus and on placement.

CONCLUSIONS AND IMPLICATIONS

The preliminary findings from the three educational sectors indicate that the placement/practicum experience is a point of difference that employers value. Learning it seems occurs from a variety of sources and via a variety of modes. Pedagogical approaches on campus are traditional lectures and laboratory classes, but also include workshops and development of portfolios with a strong focus on reflective learning. It does seem overall that with a few exceptions, any integration is largely unintentional. For example, the encouragement of reflective is intended to produce lifelong learners, rather than to foster the integration of on campus and placement learning experiences. If co-op programs wish the integration of learning to feature as defining aspect of programs that are indeed cooperative education, then explicit mechanism may need to be developed that articulate such a process as a defining feature of cooperative education programs in New Zealand.

REFERENCES


