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PATHWAYS TO FORMALLY ASSESSED WORK PLACEMENT: EMPLOYERS' PERSPECTIVES ON COLLABORATIVE EDUCATION IN THE AUSTRALIAN CONSTRUCTION INDUSTRY

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ABSTRACT

The QS and construction industry is uniquely impacted by project-based work environments. This creates special challenges for collaborative, work-integrated education of pre-professional students. This research is based on investigating the attitudes of employer's towards the use of formally assessed internships. The study comprised two stages- firstly a series of pilot interviews were undertaken with employers to test a number known issues and secondly, the results from the interviews were used to refine a set of questions that were put to a large focus group of employers who were invited from across the property and construction sector in Australia. The results showed that many employer organisations expressed considerable goodwill towards collaborative education with universities. However, the challenges caused by project-based work environments restrict employers' ability to provide comprehensive learning opportunities. This research discusses some of the distinctive issues associated with work-integrated learning in the construction industry and proposes some potential opportunities for overcoming these restrictions.

Keywords: *Collaborative Education, Project-Based Work, Property and Construction Employment, Work-Integrated Learning.*

1. INTRODUCTION

The aim of the paper is to examine the expectations of employers about the introduction of a formally assessed internship program (WIL) as part of the undergraduate degree in construction management. Existing arrangements where students undertake a range of informal work experience had become the norm whilst this informal work has some merit, there are compelling reasons for attempting to improve it and introducing a formally assessed internship for QS and construction students. The proposed internships would differ from the previous adhoc work experience program in that the internships would be for a fixed period of time (say 120 days), and would be formally assessed to determine a pass or fail grading for each student. This arrangement requires a closer working arrangement between the University, student and work place.

Research has indicated that work-integrated learning significantly contributes to the enhancement of workforce development. In addition, it represents a key Federal government policy to make the tertiary education sector work more closely with employers to assist workforce development.

One outcome is that improved learning can be achieved with university/industry partnerships (Costley and Armsby 2007; Curtis and Lucas 2001 and Harvey *et al.*, 1997). The research has called for the introduction of closer links in order to provide “transformative” opportunities for students”. Harvey *et al.* (1997) states “it is not about delivering ‘employability skills in some generic sense, rather it is about

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developing critical lifelong learners...so the focus needs to be on empowering students to become critical learners.”

The development of a partnership between the University and industry in providing work-integrated learning (WIL) that complements the program of study is widely suggested as being a panacea. It has been argued that without partnerships, students may not get the range of experience they need and may struggle to find the linkages between theory and practice in the real world (Garanvan and Murphy, 2001). This is particularly the case in QS and construction, where industrial experience is valued highly by employers. However, the nature of the project-based work environment creates many educational challenges. The next section of this paper considers the unique challenges created by project-based work environments which are common in the QS and construction industry.

1.1 PROJECT-BASED ENVIRONMENTS

Construction takes place in a demanding work environment which impacts on its workforce in a variety of ways. The industry is characterised by a continuous cycle of boom and bust that creates negative consequences for learning in all stages of the cycle. The project-based nature of work and the uncertainty associated with it, means that many employees face frequent relocation to maintain continuity of employment.

Construction is a high-risk industry characterized by organizational and physical uncertainty. Profit margins are slim and schedules are tight. In addition project delays and time overruns are common resulting in serious financial penalties for many projects. Research by Lingard and Francis (2004) showed that the nature project-based work placed considerable pressures on workers causing major stress. The results showed that this stress had not existed in other types of workplaces. These work pressures also have an impact upon firms' employees' and their interactions with work experience students. Project-based environments create a unique set of circumstances that do not exist in other types of work-places and it may be difficult for universities to place students in these environments.

The learning experiences within the construction industry have largely been ignored by researchers. However, there is a growing body of evidence to suggest that learning experiences play an important role in shaping the next generation of attitudes and behaviours as well as determining individual and organizational cultures. It has been widely reported that, Australia will face significant labour shortages in the next 25 years. The hardest hit industries are likely to be those that cannot attract high calibre, younger employees and employees from groups whose participation in the workforce is growing. Closer attention to work-integrated learning experiences in construction industry is therefore timely and necessary.

1.2 WORK SKILLS AND GENERIC ATTRIBUTES

There is also evidence that formal work placements develop wider skills in students. Past work by Crebert *et al.* (2004) looked at the development of generic graduate attributes during engineering work placements at Griffith University in Queensland. The research found that students were aware of the importance of industry work in the development of graduate attributes. The authors point out that once in the workplace students learn how to “fit in” which relates to working with their peers to achieved company outcomes. Working “collaboratively” with others enhances their skills in the workplace.

As well as the positive attributes of students doing work experience, program directors need to be mindful of student expectations and the fact that many may be unrealistic in their approach to the workplace. Mello (1998) emphasised that students on placement need to be aware that work experience is very different from what they are used to in the traditional classroom. In the workplace it is the responsibility of the student to actively manage their learning development process. Students undertaking work experience need to be comfortable taking the initiative, asking for assistance and confronting problems. The next section of the paper discusses employers' perspectives on work-integrated learning.

1.3 EMPLOYER PERSPECTIVES

A range of research papers have examined employers' perspectives on work placements. According to Callanan and Bensing (2004) it was not surprising to find that employers cooperate with universities because they gain a number of advantages. Employers reported that internships provide a "risk-free" method for companies to evaluate prospective employees; try before you buy! The internship schemes provide a convenient stream of motivated human resources that were comparatively less expensive than other recruitment alternatives. In addition, the internship model acts as secondary marketing tool, because students that returned to university "spread the word" and ideally provide a favourable endorsement of the firm to other students.

Past research by Robson, (2007) in the property sector in Melbourne suggested that due to the overwhelming need for employees within the industry there is a continual demand for work-placement students. However, it is clear from the research that employers often struggle to provide adequate learning environments for students undertaking work-placements. In the study of property professionals Robson (2007) noted that most of the employers used terms such as "expected the students to be willing to learn", "be enthusiastic", "have the ability to undertake simple tasks under instruction" and "be proactive". And one employer even mentioned a shortfall; this was having insufficient time available to train the work-experience student. In many cases it is unclear how learning is best achieved via industrial employment. There is evidence that many employers favour formally assessed work placements or internships, but are unsure how to manage the practicality of the placement. The next section considers the impact of work culture on the student experience.

1.4 WORK CULTURE

The Construction industry is a very mature industry which has been not affected greatly by changes in modern technology. The industry has many characteristics and cultures that have evolved over time, the work cultures are affected by the project-based work and employer attitudes. Research by Garavan and Murphy (2001) studied job placements for students. Their research indicated that students were affected by employer expectations and attitudes. The results suggested that employers expected a 100% commitment to the job. They were not concerned about a student's extra-curricula activities or social life. The research stated employers expected high achievement rather than valuing being "nice" and "trying hard". The authors went on to suggest that employers have certain expectation of dress code and an adherence to particular organisational practices by the students.

According to Garavan and Murphy (2001), some organisations believe that students brought skills to the organisation which were not appropriate and in some cases not valued. This resulted in the students needing a high level of feedback, which was often not forthcoming. According to the research, students often tried to make changes in order to better conform, however; in many cases these efforts went unnoticed or at least unacknowledged.

Past research has called for the introduction of closer links between university and industry to overcome these problems. Harvey (2000) stated that the focus needs to be on empowering students to become critical learners." However, the impact of the project-based work, together with the attitudes of employers, create an environment that is less than ideal for learning for students. The next section describes the research instrument used to elicit views of construction employers to WIL.

2. METHODOLOGY

The aim of the research was to examine the expectations of employer towards the introduction of a formally assessed internship program as part of the undergraduate degree. The research contained two stages; firstly a pilot study comprising interviews with employers. Secondly, a large focus group discussion was conducted with a wide range of construction employers.

The pilot study comprised 3 semi-structured interviews in which the participants were asked about issues associated with project-based work environments. That was followed by a series of questions about the

business motivation for employing work-experience students. The exploratory interviews comprised open-ended questions relating to the following; 1. How are work-experience construction management students useful to a business? 2. What problems are associated with work-experience students in a business? 3. What is the importance of generic skills to the business? 4. What employment arrangement does your business prefer for work-experience students?

The interviews highlight a number of employer attitudes that were validated in the second phase of the research. A large focus group of industrial employers was arranged to probe the issues first tested in the pilot interviews. The focus group comprised 21 Directors and Senior Managers that employ students in the fields of QS and construction management. The participants were known to the researchers from past personal contacts and all had considerable experience in employing students from the host university.

3. RESULTS AND DISCUSSION

The results of the exploratory focus group highlighted many positive and negative aspects of work-integrated learning. The overwhelming response from employers was that they were keen to employ students mainly because they were having difficulty finding staff. All of the employers were supportive of work-integrated learning and displayed considerable goodwill towards the program. It also became fairly obvious that students were also interested in working. Many of the focus group members had themselves been graduates, and they had a good understanding of the university processes. In essence the themes discussed could be distilled in three main areas, namely; Work /Time Arrangements, Skills and Attributes, and Work-Place Culture.

3.1 WORK/TIME ARRANGEMENTS

There were many very strong views expressed about the work time arrangements for students. It became clear that from an employer's perspective, students become more useful as the amount of time that they contributed to the project increase. Research shows that employers want as much time with students as possible; the more the better. However, long working times may not be in line with the objectives of the student or the university.

The tensions between the demands of the work-place and the educational objectives of the student and university are sometimes at odds. The industry participants of the focus group robustly defended their positions, indicating that two days or less was insufficient to justify their involvement in any work-integrated learning arrangement. One of the respondents stated that;

“When a student becomes part of a work-place their time is owned by the employer. The work-place is not a university and the student worker needs eventually to become productive to the firm”

The industrial respondents considered that work arrangement should be not less than 3 to 4 days per week, which ideally continues over a long period of time. Employers prefer to have students for at least one year, but agree that six months can work in some circumstances. The employers expressed a number of reasons for their views. Firstly, they suggested that when students only spent 1 or 2 days in the job it left too little time in which to get to know the people and the work associated with each project. This seems to be an important issue in project-based work. Secondly, project-based jobs change very quickly, and an individual student does not have enough time to make an impact on the project if their work visits are too infrequent.

It summary it should be noted that by the end of the focus group the industry respondents were unanimous in support of work-experience prior to graduation. They were adamant that the work experience should be done late in the course and not in the first or second year. And that sufficient time, in the region of 3-4 days per week, should be allocated for the work-placement.

The results of this research were consistent with past research that indicated industrial firms are primarily interested in work-integration to recruit future workers. (Callanan and Bensing 2004; Robson, 2007). This outcome is exaggerated by the effect of project-based work, which is invariably a fast changing environment. What is now clear is that firms prefer long placements, instead of short placements, and that

they prefer students to work later in their course when they are likely to be more productive. It also signals a warning for universities that they may need to put in place measures to protect students from excessive overwork during WIL. Past research has suggested that open and frank communication between all stakeholders is a necessary precondition to a successful work-integration scheme (Garavan and Murphy, 2001).

3.2 SKILLS AND ATTRIBUTES

The employers were asked about the generic skills and attributes that the student brought to the work-place. Past research has shown that generic skills were like communication, time management, and critical thinking are valued very highly by employers (Watson, 2002). These attributes should be developed during a university degree as a consequence of the educational process. There was general agreement that most students display competent generic skills and that they contribute positively in the work-place. However, one employer suggested that written communication was poorly developed in many students they had encountered:

“We find that literacy is a major issue coming into our business. People (students) can't write a letter, with all due respect they cannot write, you cannot put them in a room and say write me a letter from scratch they (will) start looking for things to copy and paste.”

After hearing the above experience the issue was probed more deeply to determine the extent of the problem. While there was some general discussion around the topic there were no other specific examples mentioned. It may be reasonable to suggest universities are doing a fair job at developing generic skills in their students. One participant stated:

“The reason why is because the university equips students with a set of (generic) skills that are taken into the workforce and then those skills are expanded through practical experience.”

In addition, it is clear that construction employers do actually seem to recognise the importance of generic skills. One participant commented;

“... for me there needs to be more of a two way dialogue to make sure that (student) competencies are truly rounded out; are truly rich enough to capture both what higher education has to offer, together with the huge amount of wisdom and knowledge that exists within the industry”

While employers expressed some reservations about a few individual students, on the whole firms were satisfied that the students had sufficient skill to eventually become productive workers. This research supports the work by Zusho and Pintrich (2003) who found that if students believed that they could undertake certain tasks then their ability to do so under stress improved and their use of learning strategies increased. The type of learning that takes place in the workplace enhances motivation and self-efficacy levels, as everyone is learning together and over the same time frame.

In summary the effect of project-based environments would seem to improve the generic skills of students to work in teams, communicate and manage time. The employers in this study were generally satisfied with the competence of the students, and believed that the work-place improves their capabilities in the longer term. The next section discusses the impact of the work-place culture on creating the right environment for learning.

3.3 WORK-PLACE CULTURE

There is something of a paradox for organizations that attempt to socialise graduates into their cultures. Bowden and Marton (1998) point out that organizations desire strong cultures, but at the same time want to allow the unique qualities of graduates to impact on the work situation. Past research indicates that the employers do not always provide good feedback to students in the work-place. This detracts from the learning experience because it does not provide clear directions to the students. In the focus group there was a great deal of discussion about values and culture associated with industry which may not be part of a student's university experience. One employer suggested that;

“While we’re talking about skills and attributes (which is necessary, but), culture and value alignment is probably more important to us than the actual skills that they’re coming out of the university with. Give me someone with reasonable literacy, give me someone who is aligned to the culture of the business, and the values of the business, and they’ll be great.”

The focus group participants spoke at length about the idea of “fitting in” but it was not clear exactly what that meant for the industry. Past research has suggested that it could be related to a range of issues from dress code to adherence to particular organisational practices (Garavan and Murphy, 2001). However, the participants did seem to be able to articulate much about the cultural and value alignment. In relation to the issue of culture one participant commented

“We like to call them solid citizens, they’re not just fantastic performers, but they’re aligned to where the business is going. We’d rather have one of those people than a prima donna any day of the week.”

Clearly, the one of the benefits of WIL is the introduction of the student to the cultures and norms of the industry. Robson (2007) suggest that if students are informed in advance about the different environments and the educational reasons supporting them, they are more likely to be supportive of the work experience. If students know and expect the learning process to be different, as work experience is, they understand the value of the independent and creative thought processes. This can be shown to students as being highly sought after by industry.

4. CONCLUSIONS

Much past research has called for the introduction of closer links between universities and industry in order to provide “transformative” opportunities for students. However, rather than promote understanding between higher education and industry, the high level of construction work currently available seems to have put pressure on universities to re-examine their relationship. This seems to be occurring in an environment where tertiary education may have become undervalued by both the student and employer. This research explored the steps which could reconnect student learning with the demands of industry.

This research indicates that employers were generally supportive of work-integrated learning and most displayed considerable goodwill towards the university. However, employers recognise that work and education do not have the same priorities. This research supports the work of Crebert *et al.* (2004) who suggested that employers believe that work-places are not primarily a learning environment. Further research is necessary to develop mechanisms to support change in the work-place in order to facilitate better educational outcomes for students. This remains a challenge for the project-based environments common in the property and construction industry.

This research showed that employers embrace work-integrated learning because it provides access to the human resources that are necessary for the future of their businesses. In addition, students are also interested in working, and are well paid for it. As a result there was a coincidence of need between the student and the employer. This paper has argued that the emphasis needs to be put back on the learning experiences that are the result of work placements. The construction industry is characterised by a high level of project-based work. The impact of this type of work places challenges on industry to provide effective learning environments for students.

The results of this research suggest that there needs to be a better understanding of employers’ attitudes to; work-time arrangement, skills and attributes and work-place cultures. Project-based work is known to require long working hours. Consequently, universities need to be aware that in some circumstances students engaged in WIL need protection from excessive work demands. In addition, the universities should provide students with an appreciation of the different attitudes and expectations that exist in the work-place. Through better exchanges and greater understanding of research of this nature, students, universities and employers can all benefit from work placements.

5. LIMITATIONS AND FUTURE WORK

The outcomes of this research are limited to employers in Australia that were known to the members of the academic staff of the university. Employers that chose students from other universities may have different experience to the respondents in this research. Most of the employee representatives were senior directors of their firms, and the results may not accurately represent the views of other members of the firms.

The paper was limited in its scope to the opinions of the industrialists, who were not in the business of education. Future work may consider the possibility of engaging industry to assist with curriculum and assessment. The views of students may also be sought in order to determine their perspectives.

It is clear that there are many challenges for educational institutions who would be required to manage multiple industry-university relationships and to be able to offer parity of opportunity and experience. It is also apparent that internship programmes that build in work related learning in the lean years when the industry is booming, might have difficulty in hard times

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