Facilitating student progression through partnerships with industry professional associations

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CONTEXT

Professional organisations are recognised as strategic partners for educational institutions. Industry aligned programs, supported and guided by organisations, are positioned to develop both theoretical and industry skills. The Built Environment program at CQUniversity was developed in collaboration with industry practitioners to provide students with authentic learning projects. Aligning students with industry, whilst playing a fundamental role for networking and securing future employment, it also provides students with the motivation to progress through undergraduate studies.

PURPOSE OR GOAL

Research into the factors influencing student progression and attrition abounds in the disciplines of accounting, engineering, medicine and nursing. The Built Environment discipline however has not received the same amount of attention in terms of education research. Industry exposure for students in the Built Environment was believed to be important in improving student progression and decreasing attrition but this needed to be tested.

APPROACH

The research methodology was a simple, well tested design. A quantitative analysis of institutional data between 2001 and 2013, established the context for the research question (does professional membership promote progression?) while a survey of participants (current students) provided an understanding of the relationship between progression and industry associations. Confirmation of findings was supported by structured face-to-face interviews with past students and industry professionals.

ACTUAL OR ANTICIPATED OUTCOMES

There is a benefit for students in having an industry association. Many professional organisations require industry experience as part of their professional licencing schemes. Incorporating industry exposure into an undergraduate Build Environment Program facilitates progression from the commencement of study through to employment.

CONCLUSIONS/RECOMMENDATIONS/SUMMARY

Exposing students to industry projects required them to overcome qualification isolation. Engaging industry practitioners as clients responsible for the evaluation of the project outcomes enabled students to develop industry pathways, bridging the chasm between study and professional association. This highlighted the necessity to promote an understanding of the importance of professional membership to progression.

KEYWORDS

Progression

Professional organisational memberships

Industry associations

Built Environment

Introduction

Professional organisations are recognised as strategic partners for educational institutions. Industry aligned programs, supported and guided by the organisations, are positioned to develop both theoretical and industry skills and play a significant role in legitimating change (Bauman, 2008; Greenwood, Suddaby, & Hinings, 2002). The Built Environment Programs at CQUniversity were developed in collaboration with industry practitioners to provide students with authentic learning projects. Aligning students with industry, whilst playing a fundamental role for networking and securing future employment, it also provides students with the motivation to progress through undergraduate studies. Industry aligned programs supported by organisations were positioned to develop industry skills and knowledge with an aim to provide qualified self-starting graduates (Ashford & Francis, 2007; Frank, 2005; Hughes, 2010).

There is much research into the factors influencing student progression and attrition but these studies are primarily limited to the investigation of the disciplines of accounting, engineering, medicine and nursing, as these are commonly considered mainstream and marketable in terms of students (Carroll, Ng, & Birch, 2009; Godfrey, Aubrey, & King, 2011; Olsen, 2008; Rice, Rojjanasrirat, & Trachsel, 2013). The Built Environment discipline however has not received the same amount of attention in terms of educational research. While the literature is developing with discipline oriented research in construction technology and productivity, focus on issues surrounding pedagogy and industry aligned outcomes have been somewhat neglected (du Toit & Mouton, 2012; Knight & Ruddock, 2009; Savage, Davis, & Miller, 2010).

Involving industry associations and having them actively participate in academic programs may assist student progression. Students are encouraged early on in almost all academic programs to engage with professional organisations due to the benefits that these organisations can provide. It has however not been established how these benefits actually benefit the academic progression and achievement of students and if it is just adding to the extrinsic load while students study. Do students in distance education programs and those in face-to-face environments experience the support received from these organisations the same and more importantly, do regional and metropolitan students receive the same level of support? Given the time and financial pressures placed on students, how can industry partnerships ease these burdens while simultaneously increasing organisational memberships?

Factors influencing student progression and attrition

Although many studies have been conducted into the impact on students during their academic career, limited research has been conducted and data obtained on the concept of definitions of progression based on academic, career and professional attainment. Traditionally, student progression has been assessed by measuring academic attainment defined as the positive achievement of the minimum progression rate specified by the academic institution, attainment of the minimum number of units of credit for a defined period and/or passing any compulsory barrier units of study, field or clinical work or practicum (Dobson & Sharma, 1993; Robinson, 2004).

In a study examining influences on attrition of online nursing students Rice et al. (2013, p. 181) noted "It is widely believed that student satisfaction with the nursing program and attrition rates are directly related." They found there to be two key factors influencing program withdrawal - personal reasons and academic reasons.

> Subcategories of personal reasons for withdrawal included lack of time, motivation or commitment, family issues, financial problems, career choice, and other. Subcategories of academic-related reasons for withdrawal from the program included learning preferences, program format, technology issues, process and/or procedural issues, academic performance, support, resources,

and communication .Personal reasons noted for withdrawal included family illnesses, personal struggles such as divorce, and the lack of time to devote to studies (Rice et al., 2013, p. 184).

In the United Kingdom the attrition rate among first-year university students is almost one in five while in the United States of America it is two in three (Xuereb, 2014, p. 145). Xuereb (2014) describes the serious consideration of early withdrawal from university studies as "doubting". At this university it was found that the attrition rate for students in the Built Environment programs is on average 55% for the 2000 to 2011 period improving by 2013 at 39% (CQUniversity, 2014). Foster et al. (2011, p. 51) found that approximately one third of first-year university students experienced doubts sufficiently strong enough for them to consider withdrawing from study. It was found that the most common reasons for doubting among traditional students was high academic workload, difficulties with course and difficulties with completing coursework, while for non-traditional students, they were managing competing priorities, personal difficulties and financial stress (Xuereb, 2014, p. 151).

For those students that were considering terminating their studies but did not, the most frequently reported reason for continuing was to achieve the end goal, closely followed by wanting to finish what was started (Xuereb, 2014, p. 152). It was found also that support was another major consideration for persisting at study. Family and friends were found to be the largest source of support with university services and lecturing staff only being significant for non-traditional students. The support from professional organisations was absent for most of the student population with those students in metropolitan areas, depending on the professional organisations, greater than those in the regional areas.

Carroll, Ng, and Birch (2013), found retention of postgraduate business students undertaking their studies by distance education was influenced by two main factors: their employment commitments and their family commitments. Further, five impacting institutional factors were: distance education program design, course relevance, student support systems, student orientation programs and the responsiveness of academic staff members (faculty) (p. 145). It was also found that students without a clear career-related goal were more likely to withdraw. The connection between professional organisations and student development has not been the focus of research with most professional organisations focussing on increasing student numbers rather than enhancing student membership with career or program enhancing initiatives.

Professional drivers of progression

Professional organisations are often considered strategic partners for educational institutions. While not primarily a goal of incoming students in an academic program in the construction industry, professional organisation membership plays a fundamental role for networking and securing future employment. Members seek to progress though the levels of membership (student, affiliate, member, fellow & life fellow) effectively, while in some cases engaging in philanthropic activities such as providing educational opportunities to financially strained or otherwise disadvantaged groups. Additionally, professional organisations provide accreditation for most academic programs; further increasing the acceptance of accredited program graduates in the industry.

While not directly under the control of students in academic programs the professional alignment of the student and student's career with those drivers of the professional organisations is an important aspect that is substantially influenced by the Australian Institute of Building, Australian Institute of Building Surveyors, the Royal Australian Institute of Architects, the Building Design Association of Australia and Engineers Australia. Industry accreditation by these organisations provide a smoother transition to industry employment, yet it must be emphasised that although accreditation helps with employment, there are no

formal professional organisation mechanisms for student members to secure suitable employment except on their own accord.

Industry alignment

There are a number of professional organisations active in the Built Environment, each with a specific membership based on the specific discipline, which the organisation serves. These organisations include, but are not limited to, the Australian Institute of Building (focussing mainly on construction and project managers), the Australian Institute of Building Surveyors (focussing mainly on building certifiers and surveyors), Engineers Australia (focussing mainly on engineering professionals in industry and the education sector), the Royal Australian Institute of Architects (focussing mainly on architects) and the Building Designers Association (focussing mainly on building designers).

Membership to the professional organisations include various levels ranked from low to high and typically require members to be qualified in a specific area or discipline (degree or similar qualification in construction management for the AIB), hold a licence and relevant experience as defined by law (for instance a Building Surveyor as per the AIBS) or alternatively have extensive experience in that specific discipline.

With an aging management population in the construction industry and the Built Environment, more mature aged managers are engaged in academic study to develop and align their skill with industry expectations while attempting to formalise their experience. The membership levels at which these managers engage is much higher and comes with more benefits than those of student members, yet key objectives are missing from almost all professional membership – alignment with suitable employers capable of providing ongoing cadetships and other support to distance education students. A fundamental linkage between the industry and professional organisations is broken when professional organisations, which can be the realistic link between academia and the industry, does not fulfil this function of encouraging corporate members to take part in or establish cadetships. A major obstacle in the current economic environment, even now that the carbon tax has been repealed, is that large construction groups engage in strategic projects at very low or almost no profit margin, not allowing them to take part in the process of rejuvenating the future construction related management market.

University/Industry Partnership

The Construction Industry and Built Environment represents around 8% of the Australian gross domestic product (ABS, 2012) and provides employment and engagement to more than 1.2 million people (ABS, 2013). Professional organisations serve a multitude of functions ranging from professional representation of the vocation at ministerial level, legislative decision making and influencing policy and education and training. In the Built Environment alone there are a myriad of organisations bidding for the same memberships from the same members while pursuing the same overall goals, with the exception of minor differences.

The function and success of industry placement programs cannot be discounted and have proven to be effective in providing students with a solid foundation early on in their careers (Khatimin, Wahab, & Mohamed, 2011; Mills, Lingard, & McLaughlin, 2012; Pienaar, Adams, & Dekkers, 2013; Savage et al., 2010; Williams & Sher, 2008).

Almost all professional organisations provide a level of membership for students that is affordable and designed to stimulate professional network development. In a face-to-face environment this has proven to be more successful as students can converge at social and other organisational sponsored events. Students engaged in distance education and residing in regional areas do not readily have access to the same professional events – a case in point is where there are only two members of the AIB registered in Rockhampton with one employed by the University.

Educationally, professional organisations provide accreditation to educational programs. In most cases accreditation lasts for five years; during which time annual reports are seemingly the only requirement of engagement from the academic institution.

It seems that while the education providers are engaged in the provisioning of education (and not necessarily career progression), the professional organisations are more concerned with the sustenance of the profession while not addressing the engagement and progressional needs of student members.

The study

This study addressed the gaps in the research related to progression and the effect of professional membership on academic and career advancement, with specific focus on the Built Environment. Progression is defined as the number of courses completed in relation to the number of courses attempted. While the definition satisfies institutional goals it does not adequately address progression for any other variable than academic success. Students do not only progress academically but also professionally (professional organisations), socially (friends, family and other social circles) and economically (career advancement). While an institutional definition of progression has to date been suitable for influencing and developing academic policy, a revised approach with attention to the outcomes based on student focus may be required.

The project included participants from the Built Environment and Engineering disciplines at a regional university in Australia, as well as a cohort of students enrolled in the Built Environment at a prominent South African university during 2012 to 2014. The participants from Australia were a mixture of both face-to-face and distance education students with the students in the Built Environment being mostly mature aged. Students engaged in Engineering are a mixture of traditional students and non-traditional mature aged students. The participants from South Africa are mostly typical traditional students (18-25) in a face-to-face environment.

The project also includes participants that have already graduated from the academic programs, participants who did not complete and staff lecturing into the programs. Additional to academic participants, the project has participants from industry in the form of senior managers from current tier one, two and three Built Environment employers.

The aim of the study was to explore student attrition, retention and progression in the distance education Built Environment programs at CQUniversity. The purpose was to identify student groups that exhibited different performance parameters and behavioural patterns and determine if they can be influenced. By analysing the student cohort data the research sought to find definitive groupings in the student cohort based on known and unknown factors. It has been previously stated that the current classifications for students (i.e. traditional, non-traditional, switchers) do not fully address the current student cohort and should be revisited and updated. This phase of the project sought to identify key areas and themes about student articulation to Higher Education, attrition, retention and attainment in the Built Environment at CQUniversity. It sought to identify new roles and responsibilities for professional organisations as educational partners and to identify possible new pathways for students to articulate into higher levels of career and professional actualisation. The study attempted to gain an understanding of how the input and impact of professional membership contributes to or detracts from academic progression and attrition.

Discussion and recommendations

In real terms, it is difficult to measure and quantify the benefits derived from professional membership. When comparing professional membership to career progression, career progression provides respondents with a more immediate short term effect (for instance a salary or higher pay grade, or alternative project deployments) where progression in professional membership and networking with peers will have a typically delayed reaction; for

example, a networking opportunity might need many months or years of cultivation before it can be harvested in the form of a business opportunity or position elsewhere. Many employees will shift horizontally (moving positions without increased benefits or stature) before being able to engage in a vertical career enhancing position. In an aggressive economically strained industry this is even more prevalent.

In terms of the qualification progression, respondents report that the negative impact based on personal time constraints have the biggest impact on their qualification progression. On a seven point Likert scale, personal health and financial pressures rated reasonably low on the scale at 3.51 and 4.35 respectively. While time constraints feature at 5.32 with a standard deviation of only 1.48; indicating that this sub-variable is responsible for a noticeable anguish for respondents.

A positive correlation existed between respondents' aspirations and the quantity of support received from employers. In contrast to support from employers, support from lecturers rate relatively low with a correlation of more than 50% lower. It can therefore be inferred that respondents value the input from their employers higher than that of the quantity of support received from instructors and lecturers. Equally, when comparing the usefulness derived from the support from employers it greatly outperforms the usefulness derived from any of the other categories; those being friends and close relatives, instructors and lecturers. With the development of social networking in the last ten years, a greater emphasis was expected in relation to the utility derived from the use of audio-visual support platforms and mechanisms (i.e. Skype, LinkedIn, online blogs) however the results indicated no significant correlation between the use and utility of such tools and immediate and medium term career aspirations for respondents.

As expected, a correlation existed between respondents' career aspirations and the amount of time allocated to networking with peers. The positive correlation in this respect implies that respondents do value the time spent on networking with peers and mentors in the industry, with a vision of future career development and promotion. As respondents used a standard Likert scale to respond to the questions, the average of 4.85 and standard deviation of 1.91 indicates that some variability exists in responses to this question.

Equally important to a positive correlation, is a negative correlation. This occurred between respondents' career visions for the next five years in relation to and the magnitude of the negative impact financial pressures have. It can be derived from the, small but significant, negative correlation that as financial pressure increased due to economic circumstances or personal situations, the outlook for the next five years in terms of achieving career goals increased. This is not totally unexpected, as it would be logical for a person in a dire financial situation to attempt to improve their long term situation in terms of career.

An interesting finding in relation to the five year career aspirations was that respondents did not embrace communicative technologies such as Skype, FaceTime or similar platforms in the pursuit of career development activities. Audio-visual support, online blogs and wiki's had the lowest frequency of use by respondents and were also considered low with respect to applicability to function and utility derived. However, some of the highest average responses were for the variables relating to the importance of computer and broadband connectivity for the daily execution of career development related activities, mathematical ability and the influence of personal health pressures. It would seem natural for respondents to report on the influences of health and financial stress and how it influenced daily activities, however, the absence of a distinct correlation between these factors and career development and vision requires further investigation. In fact, the correlations derived from these factors (Broadband internet connectivity and hardware, personal health, the usefulness of networking with peers, support from friends and family and mathematic ability) are extremely low. A possible interpretation of the high averages returned for these variables might be that respondents regard it as important for the day to day execution of work activities but that the variables themselves do not have a functional influence on the achievement of long term

career aspirations. The high average variables have a distinctly shorter long term view than that associated with higher correlations. Interestingly enough, all of the significant correlations came out mid-field when the results were sorted according to the values of the individual means of the results.

Can professional organisations take on a more engaged position as part of a partnership with educational providers? It has already been established that student members gain limited value from memberships and even if these are provided free of charge, it should be more than just a hook to secure a full fee paying member down the line. Members of organisations prefer tangible benefits to mountains of junk mail (or email). Cadet or student employment networking could alleviate the pressure on students to find suitable work required before graduation and could provide a simple pathway to higher levels of membership. Professional organisations could easily engage with members to cultivate possible research areas for the deployment of post graduate students while developing new technologies or methodologies. Measurement of these accomplishments would be a simple process to track along a longitudinal study to determine if the actions or inactions of these organisations impact attrition. Educational providers, professional organisation members and industry stand to gain much in terms of productivity, quality and safety by providing joint opportunities for students in the Built Environment. It is in doubt if equilibrium will ever be attained as the demand for operational cadetships far outweigh the supply and even when the demand is met, logistical stumbling blocks void opportunities due to geographical locations.

Conclusion

Student engagement and progression remains contentious for academic institutions, while membership, professional representation, industry succession planning and engagement can be the professional organisation Achilles' heel. From this research it is clear that students react differently to professional organisations depending on their academic programs, mode of study and physical location. Those students in distance education programs located in remote or regional areas engage constantly with industry out of necessity and are not at all affected by the presence or absence of the professional organisation. It is further clear that professional membership is very low on the list of priorities and while students might not progress academically (i.e. pass courses) they progress professionally through career advancement. Those students in face-to-face metropolitan areas experience the presence or absence of these organisations much more acutely. A possible reason for this is that although human resources are scarce in the Built Environment, the occurrence of organisational technical silos occur more readily forcing students to engage professional organisations and their activities more frequently to attain the same level of professional development as those in distance education programs in regional or remote areas.

Results show clearly that students give the greatest attention to immediate goals (i.e. course and job progression) and the least to longer term goals (i.e. professional progression). This highlights a need for bridges between short and long term goals. The role of stakeholders in securing and strengthen these bridges is the subject of ongoing research.

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