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I Am What I Am, Am I? The Development of Self-efficacy through Work Integrated Learning

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Abstract: An advantage of tertiary study is the learning of new theories and ideologies, which can give a new perspective on how one views the world and their place in it. However, a potential barrier to this growth can be students' own perceptions of themselves and their capabilities to deal with change and achieve results –known as 'self-efficacy'. While universities can be good at educating students about the theoretical foundations for their future careers, it is questionable to what extent universities help students to systematically develop their sense of self and their ability to cope with change. Work integrated learning (WIL) in higher education is one way to develop, amongst other things, students' self-efficacy. WIL is particularly useful to develop self-efficacy through mastery experiences, modelling, social persuasion and physiological states (Bandura 1977, 1982, 1986, 1997; Elliot and Dweck 1988; Harrison 2010; Schunk 1991). This study assesses self-efficacy in the context of a unique business degree during which students undertake an external off-campus internship during the 2nd and 3rd year of their degree while being supported by a continuous orientation program (known as the PDP). This paper builds upon prior research which provided preliminary evidence that an on-campus WIL orientation program undertaken in students' 1st year improved their self-efficacy. However, what have been the effects once students go off-campus and commence an internship whilst studying part-time? It will be argued that the internship combined with the continuous support of the PDP has allowed students to develop a greater sense of their capabilities to deal with challenges and thereby allow them to reach their full potential. This may result in students attaining a new sense of who they are and what their capabilities are – a new 'I'. It is with such an increased self-efficacy that students will be better placed to face the challenges of their future personal and professional lives.

Keywords: Self-efficacy, Work Integrated Learning, Motivation, Learning, Business, Accounting

Introduction

Tertiary education is designed to equip students with the technical and generic skills for success in their future workplace. Students may acquire these tools during their degree but not have the self-efficacy to use them. A lack of student self-efficacy can undermine student satisfaction, persistence with studies and academic performance (Bandura 1977, 1982). Work Integrated Learning (WIL), through its application of theoretical learning in a workplace environment (whether actual or simulated), is an authentic learning experience that can promote self-efficacy (Coll, May and Zegwaard. 2001). In an earlier study Freudenberg, Cameron and Brimble (2010) found that students who completed the Professional Development Program (PDP), being an on-campus WIL experience component of their business degree, demonstrated increased levels of self-efficacy over a 12 month period. One important limitation of that study was that it was an on-campus WIL experience and would such results continue to an off-campus experience.

This paper reports the findings of the effect of a WIL experience on students' self-efficacy before and during their off-campus internship while completing their business studies part-time. The study relies on self-reported measures of student self efficacy over two years. The remainder of this paper examines the importance of self-efficacy and the potential WIL has in its development. The design of the business degree (known as the Professional Degree) as well as the research method is then discussed. This is followed by a discussion of the results. The final sections then consider limitations and the potential for further research, before concluding.

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Theoretical Background

There are a number of theories with relevance to generic and professional skills development which seek to explain how learning takes place. Social cognitive theory recognises that people learn from others via observation, imitation and modelling and are influenced by their own internal cognitive processes, including attention, memory and motivation; although learning does not always change behaviour (Bandura 1977, 1986). Likewise, in an academic setting, Schunk (1991) suggests that even when students have obtained the necessary skills, they may not be motivated to apply them. While self-efficacy and outcome expectations impact on performance, self-efficacy can have a stronger impact since the self-assessment of ability affects the outcome expectations themselves (Bandura 1986). Additionally, an increase in self-efficacy maintains motivation and improves skill development (Schunk 1991). In the sections which follow, the construct of self-efficacy is examined, as well as the potential impact of WIL on it.

Self-efficacy

Self-efficacy is defined as "the judgments of one's capability to organise and execute the courses of action required to produce given attainments" (Bandura 1997, 3). Self-efficacy is distinguished from self-concept by its narrow focus on self-assessment of competence and limitations in a specific context rather than a holistic sense of confidence (Zimmerman 1995). Self-efficacy influences the choices, effort and persistence of human behaviour but it can vary in its level, strength and generality (Bandura 1977). Students will therefore have differing perceptions about the difficulty of a task that they can perform and whether they can perform it. Generality refers to whether the self-efficacy beliefs are transferable within the same activity domain or across a number of activities (Holladay and Quinones 2003), for example, efficacy for mathematics and statistics or a more general academic efficacy.

Self-efficacy is responsive to four factors: mastery, modelling, persuasion and physiological states. Mastery experience is a self-evaluated increase in confidence gained from prior success. When students progress through a degree, they learn they are becoming more skilful by observing their own goal progression (Elliot and Dweck 1988), while students who have experienced failure may suffer from problems of self-doubt, particularly if failure occurs before a strong sense of efficacy is formed (Bandura 1997). Vicarious experience is a self-evaluated comparison against the performance of others, in other words, modelled behaviour. Modelling is gaining greater importance given the need to learn specialised competencies in a complex and rapidly changing knowledge environment (Bandura 1986). Verbal persuasion includes feedback on goal progress which is shown to increase self-efficacy (Bandura and Cervone 1983), particularly from credible persuaders (Zimmerman 2000) such as industry experts. Finally, physiological states, that is, factors related to both physical and emotional conditions, such as fatigue, anxiety or stress, can also impact on perceived capability. It is the responsiveness of self-efficacy to these four factors which leads to studies such as this one in which self-efficacy beliefs are used "as indicators of change during instructional interventions as well as indicators of initial individual differences" (Zimmerman 2000, 88).

The nature of self-efficacy is such that the four factors above are indirect rather than direct influences. Information from all sources must be cognitively appraised in conjunction with environmental factors resulting in self-enhancing or self-hindering behaviour and feelings like excitement, stress or depression (Bandura 1977; Schunk 1991). The importance of accurate self-appraisal cannot be underestimated since "acting on misjudgement of personal efficacy can produce adverse consequences" (Bandura 1982, 123). As students self-reflective capabilities increase, so too does their self-efficacy judgement which later becomes a substitute for external guidance (Bandura 1996). Furthermore, increases in perceived capability lead students to take on more challenging goals (Zimmerman, Bandura and Martinez-Pons 1992). Therefore, programs that

provide mastery and vicarious experiences and opportunities for feedback and self-reflection not only assist in the accurate appraisal of student's own capabilities, but they are essential to informing and supporting students to become independent learners.

Work Integrated Learning (WIL)

One of the ways universities assist students in developing their self-efficacy is through WIL. WIL is typically described as "educational programs which combine and integrate learning and its workplace application, regardless of whether this integration occurs in industry or whether it is real or simulated" (Atchison, Pollock, Reeders and Rizzetti 2002, 3).[1] The various benefits of WIL have been well documented and reviewed in previous studies by Freudenberg, Brimble and Cameron (2009 and 2011).

Despite its documented benefits, Allen and van der Velden (2007) note the paucity of research on WIL in terms of its psychological impacts. While self-efficacy has not received much direct examination in the WIL literature, it is clear that a relationship between WIL and self-efficacy exists. Studies demonstrate that the authenticity and contextualisation of the WIL learning activities, as well as the opportunities for critical reflection through formative feedback are central to student motivation, engagement and persistence (Bandaranaike and Willison 2011; Cumming and Maxwell 1999; Raelin 1997). These components can provide a platform for students to enhance their self-efficacy, particularly through industry participation, and thereby improve task performance both during the WIL experience and throughout the student's career development (Lent and Hackett 1987; Lent, Brown and Hackett 2002). Students who can observe and obtain feedback from senior professionals in their field are likely to significantly increase their self-efficacy (Coll *et al*. 2001) and provide students with a richer understanding of the key attributes of success (Harvey, Moon, Geall and Bower 1997). Furthermore, WIL programs provide students with a history of varied experiences which may boost a student's self-efficacy when encountering a variety of future situations (Sherer *et al*. 1982).

A number of recent studies have empirically addressed the gap in the cognitive WIL literature, but produce conflicting evidence. In a study of 716 students across business and other schools within a United Kingdom university, Purdie, McAdie, King and Ward (2011) found that WIL more strongly affected students' emotions and cognitions rather than their behaviours. However, there were significant differences in measures of developing pathways to meet goals, the confidence to achieve goals and test anxiety between placement (n=488) and non-placement students (n=228); although there was no significant difference in academic self efficacy, motivation or study skills.[2] In an Australian business school context, Habel and Habel's (2010) study of marketing students found a relationship between approaches to learning and self-efficacy, but the support for WIL as a strategy to improve students' self-efficacy was weak. In contrast, positive growth in students' self-efficacy has been demonstrated in a business school context with WIL experiences including a Student-Industry Conference (Freudenberg, Brimble, Vyvyan and Corby 2008), an Employment Ready Program (Subramaniam and Freudenberg 2007) and, in an earlier version of this study, the on-campus PDP (Freudenberg *et al*. 2010). Arguably, the structure and support aspects of the WIL program may influence results.

The major differences between contemporary studies are the nature of the WIL activity and the presence or lack of an integrated support structure. Habel and Habel (2010) examine a one semester on-campus project with feedback and interaction from industry, while Purdie *et al*. (2011) consider industry placements. Given the greater opportunity for mastery experiences during a placement, it is not surprising that this produces a greater impact. Freudenberg *et al*. (2010)

[1] There are a number of terminologies used to describe WIL, including cooperative learning, service learning, and industry based learning however the term WIL is used in this paper for consistency.

[2] Unlike Freudenberg *et al*. (2010), the study lacked pre and post testing, so despite placement and non placement students ended up with almost even levels of self-efficacy, the change in self-efficacy for both groups is unknown.

describe a comprehensive and integrated program involving on-campus industry preparation activities. In this way, not only are Allen and Peach's (2007) concerns over preparation for and communication during WIL managed, but closer attention can be paid to professional education as a "process of becoming" (Dall'Alba 2009, 141).

An emerging area in the WIL literature is transition to profession efficacy. Harrison's (2010) investigation of the relationship between environmental differences in social and structured support and transition to practice self-efficacy provides empirical evidence of the combined effect of environmental and individual differences on self-efficacy. For example, even students who are challenged can build confidence when interventions support reflection and a positive interpretation of events. Additionally, professional socialisation opportunities, such as the networking and mentoring activities, have a broad impact. When coupled with social and structured support for a student's WIL experience, professional socialisation can improve students' fit with an organisation and profession, better meet their learning needs and reduce dissatisfaction (Allen and Peach 2007; Coll, Pinyonatthagan and Pramoolsook 2003; Eames 2000; Harrison 2010).

With a focus on emerging Accounting and Financial Planning professionals, Freudenberg *et al*. (2010) found the strongest growth in self-efficacy measures are related to students' transition from the classroom to the workplace, including confidence in beginning an accounting or financial planning career, networking with industry members, and job interviews. Additionally, an appreciation of professional knowledge through WIL activities has provided students with career direction and an understanding of what skills are relevant for future career success (Patrick *et al*. 2008; Freudenberg *et al.* 2009 and 2011). This paper extends the prior study by exploring self-efficacy from an academic and transition to profession perspective during the students' two internship years. The following section will highlight the ways in which the PDP provides the necessary academic and social support, feedback and opportunities for reflection.

Design of the Professional Degree

The *Bachelor of Commerce (Professional)* degree creates a meaningful link between study and career, and engages industry in the learning process (the Professional Degree). The Professional Degree is a three year degree offering majors in Accounting and Financial Planning. The Professional Degree incorporates a two year paid internship and the PDP as a continuing orientation program to ensure that students are adequately equipped and supported for the WIL experience that they will undertake in their 2nd and 3rd years of their degree. Students study in a trimester mode, completing 12 out of 24 courses towards their degree in their first year of full-time study. Towards the end of the first year, students have the opportunity to apply for paid internship positions with industry partners. Unsuccessful students continue to study full-time and thus complete their degree within two years. Successful students convert to part-time study (2 courses per trimester) in their second year while undertaking their internship three or four days per week. The trimester mode allows interns to complete their degree at the end of three years with the added benefit of having undertaken an internship of at least 1920 hours.

The PDP is an integrated continuous professional development program delivered to commencing and continuing students in the days prior to the start of each trimester (known respectively as PD#1, PD#2 and PD#3) throughout students' three years of study. PDP is designed for the support and systematic development of students' professional skills and awareness, industry knowledge, generic skills and self-efficacy by structuring activities based on students' progression (1st, 2nd or 3rd year). Industry partners deliver key components of the program including professional socialisation opportunities such as networking and mentoring. Industry-connect groups are formed with approximately nine students (three 1st, 2nd and 3rd year students) and at least two industry mentors. A number of formal and informal activities take place throughout the year to develop the relationship between members. The small number in each group allows expectations and goals to be customised between the mentor and student, with the power of

modelling and verbal persuasion enhanced by the inclusion of more senior students in each group as well as industry partners. This paper focuses on the PDP as it relates to supporting and developing 2nd and 3rd year students undertaking their off-campus internship. Below is a detailed description of the PDP activities that continue to develop students' self-efficacy through mastery, modelling, persuasion and physiological experiences.

For 2nd year students, PD#1 focuses on internship preparation with sessions on 'Being a Leader', 'Preparation for Internship' and 'Advanced Research Skills'. Industry sessions include 'Dealing with Clients: Phone and Email Etiquette', 'Time recording and Budgets', 'Introduction to Software in Financial Planning and Accounting' and 'Business Letters'. PD#2 focuses on developing professional skills (as most have commenced their internship) with sessions on 'Psychological Testing: What does your profile mean?', 'Assertion Training' and 'Cultural Diversity'. Industry-led sessions include 'Meeting Your Professional Bodies' and 'Active Listening and Note Taking'. In addition to presenting at the Student-Industry conference, 2nd year students continue to develop their academic and professional skills in PD#3 with sessions on 'Stages in Decision Making', 'Constructive Feedback' and 'Starting Your Own Business'. 2nd year is therefore a vital year in the students' journey since they receive support and extensive feedback from 3rd year students, academics and industry mentors. Feedback plays an important role in developing students' awareness of their strengths and weaknesses, how to overcome barriers to learning on campus and the workplace, understanding of progress towards their goals and, in most cases, students experience an important success in gaining an internship. Feedback and success impact on the physiological and cognitive processes of the student and have a positive relationship with self-efficacy. 2nd year students are therefore well-positioned to have encouraging mastery experiences in their internship placements rather than negative feelings and difficulty in coping.

For 3rd year students, PDP focuses on higher order generic and professional skills. 3rd year students have the opportunity to model skills and behaviours for 1st and 2nd year students by facilitating sessions, for example, study skills, interview role plays and internship preparation as well as providing support and feedback to 1st year students during the preparation and conference days of PD#3. 3rd year students are also involved in interactive sessions in which industry help to further develop the students' professional sense of identity through modelling and persuasion. PD#1 includes sessions on mentoring, self promotion, and media skills, while PD#2 focuses on enhancing generic capabilities with industry conducting sessions on 'Ethics in the Profession', 'Working Overseas', 'Pro Bono/Community Work' and 'Negotiation Skills'. PD#3 continues this theme with sessions on 'Professional Skills Management', 'Managing People' and 'Alumni'. Students are exposed to their world of professional possibilities and how to communicate as professionals, connect with others and maintain relationships. Mastery of communication and connection experiences are further developed during the two year paid internship.

Research Methodology

This study employs a longitudinal survey methodology to examine the impact of the Professional Degree and its internship experience on the 2nd and 3rd of study for the PD Students, as well as their 1st year (which is reported in a prior study; Freudenberg *et al*. 2010). The instrument was first administered at the start of the university year in 'orientation week' in an attempt to capture students prior to engaging extensively with the university. The instrument was readministered at 12, 24 and 34 months, being the beginning of the students' second year (and start of the internship), and the beginning and end of the third year, respectively. In addition, a control group (the Control Group) of students in a similar degree that does not include the internship were surveyed at similar times as the primary sample. There were two cohorts of PD Students surveyed, being those students who commenced in 2008 and in 2009. Similarly, a number of cohorts have been surveyed for the Control Group. The data for these cohorts have been aggregated to allow for analysis of the overall experience of the students.

Survey Instrument

The survey instrument developed included four sections. The first contained standard demographic questions, with remaining sections containing questions about the students' satisfaction, perceptions of self-efficacy and generic skills. The focus of this paper is students' self-efficacy and hence our analysis will concentrate on these elements of the survey. In formulating the survey instrument to measure students' self-efficacy the prior work which has focused on task-specific as well as generalised self-efficacy was utilised (Bosscher and Smit 1998; Chen and Gully 1997; Kirk and Brown 2003; Subramaniam and Freudenberg 2007).[3] Consequently, a 21 item measure of self-efficacy was adopted, comprising both task specific items and generalised measures. Students rated their self-efficacy on a five point scale from 'not confident at all' (1) to 'very confident' (5).

Descriptive Statistics

Given that the vast majority (98 to 100%) of PD Students were domestic students (this is in part due to work restrictions with study visas), all students identifying as 'international' were filtered from the results. This was particularly important as the Control Group had a large percentage of international students in comparison (up to 70%). It was thought the experience of international students could confound the results when comparing the PD Students and the Control Group. A total of 578 useable student surveys resulted from this process (it was not mandatory for students to participate). Of the total surveys, 124 were from the PD Students in first year and 61 in the second year, 33 at the beginning of third year and 27 at the end of third year. For the Control Group there were 154 and 63 respondents in the first and second year surveys respectively, with 81 and 35 for the beginning and end surveys of the third year. Summary descriptive statistics for the samples are provided in Table 1.

Generally there was a dominance of female respondents, consisting of up to 70% of PD Students and 60% for the Control Group. For the earlier years, a large percentage of students were in the less than 20 years age bracket, but expectantly as the longitudinal study progressed a larger percentage was in the 20 to 30 year age bracket. In terms of the students' average scores to enter university (referred to Overall Position in the relevant jurisdiction) the PD Students had slightly better scores ranging from 10 to 7.4; whereas the Control Group ranged from 11.44 to 9.3. These differences are not viewed as material in so far as the typical population of Bachelor of Commerce students at the institution, however, results should be considered in light of these.

[3] General self-efficacy scales have demonstrated valid associations with initiation and persistency in behaviour (Sherer *et al*. 1982). However, it is argued that task-specific items will better predict individual behaviour at work. For instance, Wang and Richarde (1998) provide empirical support indicating that task-specific measures could outperform a general efficacy scale in the prediction of performance on cognitive tasks.

Table 1: Descriptive Statistics

Cohort	PD Students								Control Group							
Item	1st Year		2nd Year		Beg 3rd Year		End 3rd Year		1st Year		2nd Year		Beg 3rd Year		End 3rd Year	
N	124		61		33		27		154		63		81		35	
Gender																
Male	49	40%	19	31%	10	30%	8	30%	75	49%	28	44%	38	47%	14	40%
Female	75	60%	42	69%	23	70%	19	70%	79	51%	35	56%	43	53%	21	60%
Age																
> 20	77	62%	33	54%	22	67%	9	33%	93	60%	26	41%	14	17%	2	6%
20-30	36	29%	22	36%	9	27%	17	63%	49	32%	30	48%	52	64%	28	80%
31-40	7	6%	2	3%	0	0%	0	0%	11	7%	4	6%	10	12%	3	9%
>40	4	3%	4	7%	2	6%	1	4%	1	1%	3	5%	5	6%	2	6%
Entrance Score	10		8.5		8.4		7.4		9.9		9.3		9.9		11.44	

** Entrance score refers to the average OP (Overall Position) university entry score of the respondents.*

Results and Discussion

Summary survey data presented in Table 2 provides evidence to support the notion that participation in the PDP and internship overall had a positive impact on all measures of students' self-efficacy. The data evidences a 19.9% average increase in self-reported self-efficacy from the start to the end of the program for the PD Students, with the Control Group improving by only 3.5% in comparison. PD Students exceed the Control Group on 19 of the 21 measures at the end of their studies and had a final self-efficacy average score of 3.99/5 in comparison to 3.79. This provides evidence of the positive impact of the Professional Degree on student self efficacy.

Self-efficacy Levels Over Time

Over time, it appears that the PD Students have increased their self efficacy with a major gain in year one and subsequent improvements in years two and three: Figure 1. In contrast, the Control Group commenced with a higher level, but declined in year one, recovered ground in year two and then improved in year three. However, at the end of each academic year the PD Students exceeded the Control Group.

1st Year of Study

A closer examination of the data by year shows that the PD Students make significant self-efficacy gains in the first year of study with a greater than 5% increase in all 21 measures from when they commenced university: Table 2 and Figure 1. Indeed, 17 of the measures had 10% or greater increase for the PD Students, while the Control Group's experience of their first year of study saw no self-efficacy measure increase by greater than 5%. In fact, 12 of the 23 measures for the Control Group decreased after their first year experience at university. Even though the PD Students appear to have much lower self-efficacy at the start of their program, this is reversed by the end of first year, to a level where they are exceeding the Control Group. This suggests that the continuous orientation program (the PDP) which develops both academic and professional skills has had an impact on the PD Students' self efficacy in their first 12 months at university. For a complete discussion of this first year experience refer to the work of Freudenberg *et al*. (2010).

Table 2: Student self-efficacy development in the PD Students and the Control Group

	PD Students				Control Group			
	PDP	*Internship & PDP*						
Self-Efficacy Measure: How confident are you in your ability to...	**1st year**	**2nd year**	**3rd year (beg)**	**3rd year (end)**	**1st year**	**2nd year**	**3rd year (beg)**	**3rd year (end)**
1..progress through the ranks in a new place of employment.	3.22	3.68	3.79	3.78	3.50	3.37	3.56	3.54
2. ..achieve most career goals that you have been able to set for yourself.	3.46	3.85	3.91	4.11	3.74	3.75	3.68	3.74
3. ..accomplish difficult tasks when faced with them.	3.40	3.73	3.82	3.93	3.74	3.63	3.69	3.85
4. ..obtain outcomes that are important to you.	3.72	3.95	4.12	4.22	3.87	3.89	3.90	4.03
5. .. succeed at almost any endeavour to which you put your mind to.	3.56	3.87	3.85	4.07	3.85	3.87	3.98	3.86
6. .. successfully overcome many challenges.	3.52	3.90	3.91	4.07	3.83	3.78	3.83	3.69
7. .. perform effectively on many different tasks.	3.47	3.88	3.73	4.15	3.74	3.89	3.94	3.83
8. . complete most tasks very well compared to other people.	3.52	3.69	3.73	4.04	3.57	3.70	3.80	3.69
9. .. perform quite well even when things are tough.	3.23	3.78	3.94	3.81	3.64	3.63	3.76	3.74
10. .. know what is expected of you as a worker.	3.47	3.91	4.18	4.07	4.02	3.98	3.91	3.89
11. .. know how things 'really work' inside an organisation.	2.90	3.57	4.00	4.00	3.58	3.63	3.76	3.71
12. ..to be clear when presenting your ideas.	2.91	3.52	3.55	3.63	3.47	3.19	3.56	3.60
13. .. listen effectively to gain information.	3.70	3.95	4.00	4.00	3.85	3.81	3.92	4.03
14. .. coordinate tasks within your work group.	3.35	3.82	3.88	3.89	3.68	3.71	3.83	4.03
15. .. function well at work even when faced with personal difficulties.	3.35	3.72	4.00	3.96	3.65	3.56	3.83	3.85
16. .. manage conflict among group members.	3.30	3.65	3.88	3.81	3.54	3.48	3.46	3.76
17. . invent new ways of doing things.	3.22	3.54	3.48	3.85	3.28	3.32	3.54	3.71
18. .. begin a career in the Degree that you are studying.	3.61	4.36	4.30	4.33	3.94	3.68	3.65	4.03
19. .. network with Industry members of the profession that you are studying.	2.86	3.85	3.82	3.89	3.38	3.19	3.26	3.54
20. .. be more effective in job interviews for your Profession.	3.04	3.88	3.76	4.11	3.48	3.13	3.21	3.71
21. .. recognise and take advantage of opportunities when they arise.	3.35	3.95	3.97	4.15	3.72	3.52	3.64	3.86
OVERALL AVERAGE	**3.34**	**3.81**	**3.89**	**3.99**	**3.67**	**3.61**	**3.70**	**3.79**

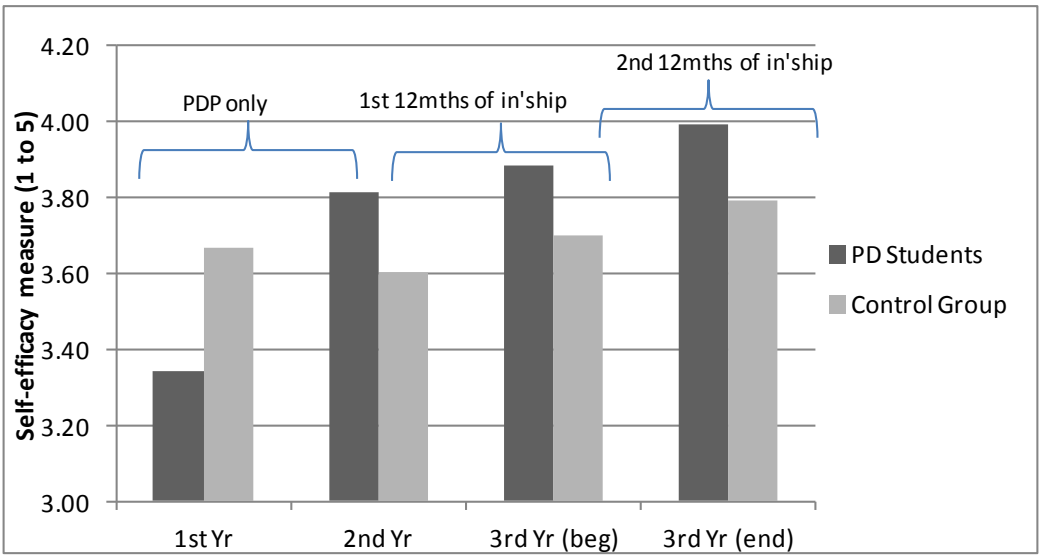

Figure 1: Average self-efficacy scores over time

Note: This table presents the average self-efficacy scores (that is the average of all 21 items) for the PD Students and the Control Group over each time period.

1st 12 Months of Internship

In second year the PD Students complete the first twelve months of their internship and the data shows that on average gains in self-efficacy are maintained (Figure 1 start of 3rd year column); although at a lower rate to that in the first year (average increase to 3.89 from 3.81 at start of 2nd year). Interestingly, while the Control Group improves in second year also, this only serves to elevate them back to the levels obtained on entry to their degree (3.70 from 3.61 in year one). There are also differences in terms of the specific self-efficacy measures (Figure 2) with the PD Students having the greatest percentage change in the following items after their first 12 months of internship:

- 11. Know how things 'really work' inside an organisation (+12%)
- 15. Function well at work even when faced with personal difficulties (+7.5%)
- 10. Know what is expected of you as a worker (+6.9%)
- 20. Be more effective in job interviews for your Profession (-3.1%)
- 7. Perform effectively on many different tasks (-3.9%)

The major gains appear to be made in areas directly related to the internship experience with items 10 and 11 illustrating a positive outcome, while item 20 shows a decrease which is most likely due to the reality of undertaking a number of real interviews as opposed to the skills development exercises and role plays in the first year of study. The increase in item 15 shows students gaining in self efficacy through the process of managing the transition from full time student to part-time student and part-time para-professional. The decline in item 7 however suggests that the multitasking and time management presented some challenges to students.

For the Control Group, a different pattern is seen with the greatest percentage change in the following items:

- 12. To be clear when presenting your ideas (+11.6%)
- 15. Function well at work even when faced with personal difficulties (+7.6%)
- 17. Invent new ways of doing things (+6.65)
- 10. Know what is expected of you as a worker (-1.8%)
- 2. Achieve most career goals that you have been able to set for yourself (-1.9%)

Interestingly, two of the items are opposite to the PD Group (items 10 and 17), which suggests that the internship is having an impact on the students (given the academic programs they complete are very similar). Generally, the Control Group appears to improve on self-efficacy items that are more related to their academic environment.

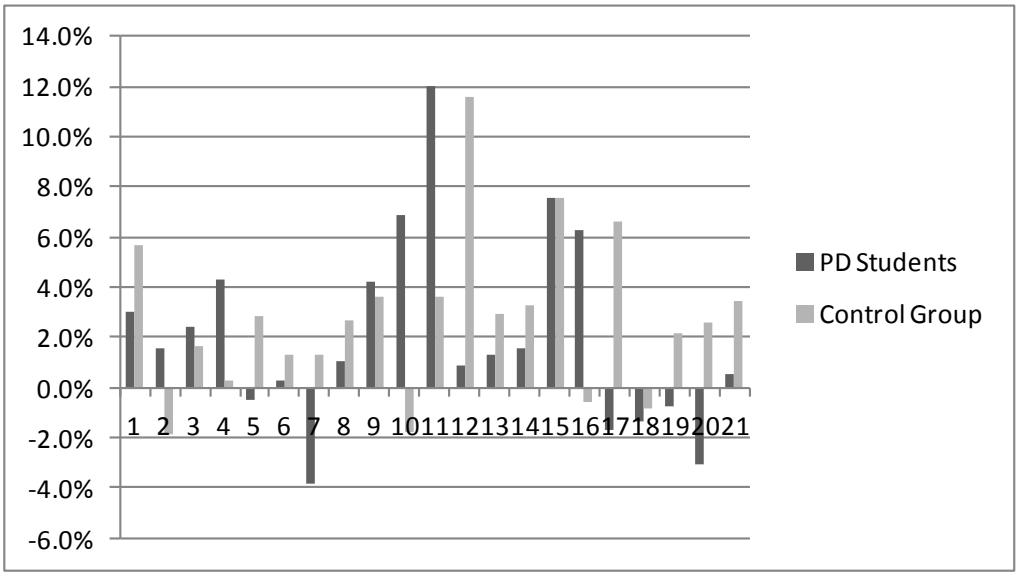

Figure 2: Differences over 1st 12 months of Internship

Note: This figure presents the difference between scores for each item for the PD Students and the Control Group over the period from the start of the 2nd year of study to the start of the 3rd year of study (being the first 12 months of internship for the PD Students). A positive score reflects an increase in self-reported self efficacy.

2nd 12 Months of Internship

In the final year of study further improvements in self-efficacy are seen for both groups with the PD Students (Control Group) improving from an average of 3.89 (3.70) across the 21 measures to 3.99 (3.79). There are also once again differential movements in the individual items: Figure 3. The PD Students' greatest percentage changes occurring in the following items:

- 7. Perform effectively on many different tasks (+11.3%)
- 17 Invent new ways of doing things (+10.6%)
- 20. Be more effective in job interviews for your Profession (+9.3%)
- 9. Perform quite well even then things are tough (-3.3%)
- 10. Know what is expected of you as a worker (-2.6%)

The Control Group had the greatest percentage change in the following items:

- 20. .Be more effective in job interviews for your Profession (+15.6%)
- 18. .Begin a career in the Degree that you are studying (10.4%)
- 16. Manage conflict among group members (+8.7%)
- 6. Successfully overcome many challenges (-3.7%)
- 5. Succeed at almost any endeavour to which you put your mind to (-3.0%)

For the PD Students this appears to represent a settling into their internship and the realities for managing professional work, study and life balance. For the Control Group, it appears that as

they progress to the end of their degrees and through graduate recruitment processes they improve on their self-efficacy relative to vocational and career development skills. However, overall both the improvement in and levels of self- efficacy are greater for the PD Students across both averages and number of specific self-efficacy areas, suggesting that the internship program has a continued positive influence in the final year of study.

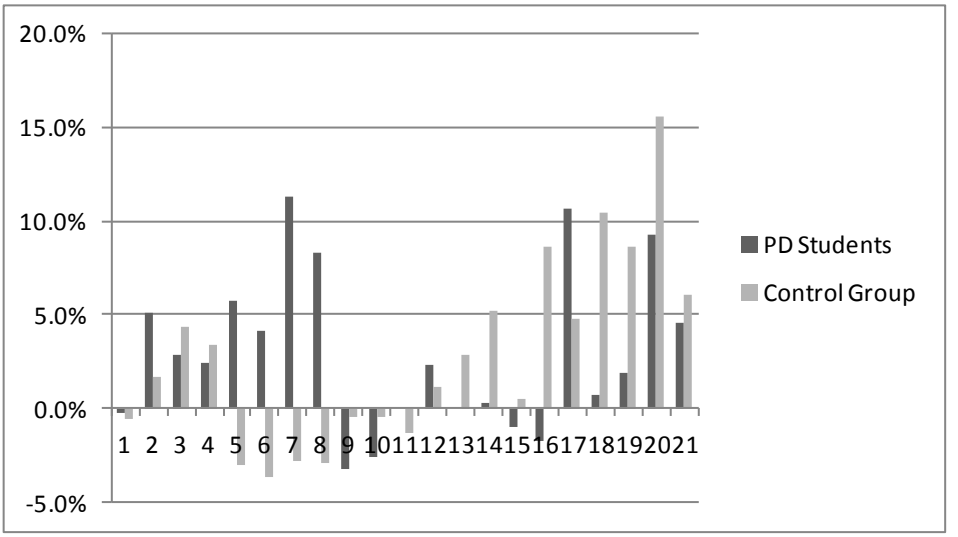

Figure 3: Differences over 2nd 12 months of Internship

Note: This figure presents the difference between scores for each item for the PD Students and the Control Group over the period from the start to the end of the 3rd year of study (the second 12 months of internship for the PD Students). A positive score reflects an increase in self-reported self efficacy.

Overall

When considering the impact of the entire degree (including the 24 month internship), it appears that the PD Students at the end of their degree have experienced greater improvement in their self-efficacy compared than the Control Group: Figure 1. In fact PD Students have increased their self-efficacy on average 16% more per measure than the Control Group: Figure 4. The greatest improvements over the period for the PD Students were:

- 11. Know how things 'really work' inside an organisation (+38%, Control Group +4%)
- 19. Network with Industry members of the profession that you are studying (+36%, Control Group +5%)
- 20. Be more effective in job interviews for your Profession (+35%, Control Group +7%)
- 12. To be clear when presenting your ideas (+25%, Control Group +4%)
- 21. Recognise and take advantage of opportunities when they arise (24%, Control Group +4%)

Of the 21 measures only one improved less than 10% over the three year period for the PD Students, while for the Control Group only two measures improved by 10% or more. Two measures, "successfully overcome challenges" and "know what is expected of you as a worker" declined over the period by 4% and 3% respectively for the Control Group.

In summary, we suggest that the data provides strong support that a WIL experience represented by an internship does help to improve student self-efficacy. Whilst it is acknowledged that the Professional Degree is not the sole reason for the differences in self-efficacy between the

PD Students and Control Group, the quantitative data demonstrates that this unique WIL business degree is a significant factor. Further, the literature suggests that a WIL experience in isolation may not deliver these results and it is important that students are properly prepared and have on-going support for the challenging (and rewarding) experience that WIL can provide. The PDP provides such necessary support for the internship experience by integrating student and industry participation in a professional setting.

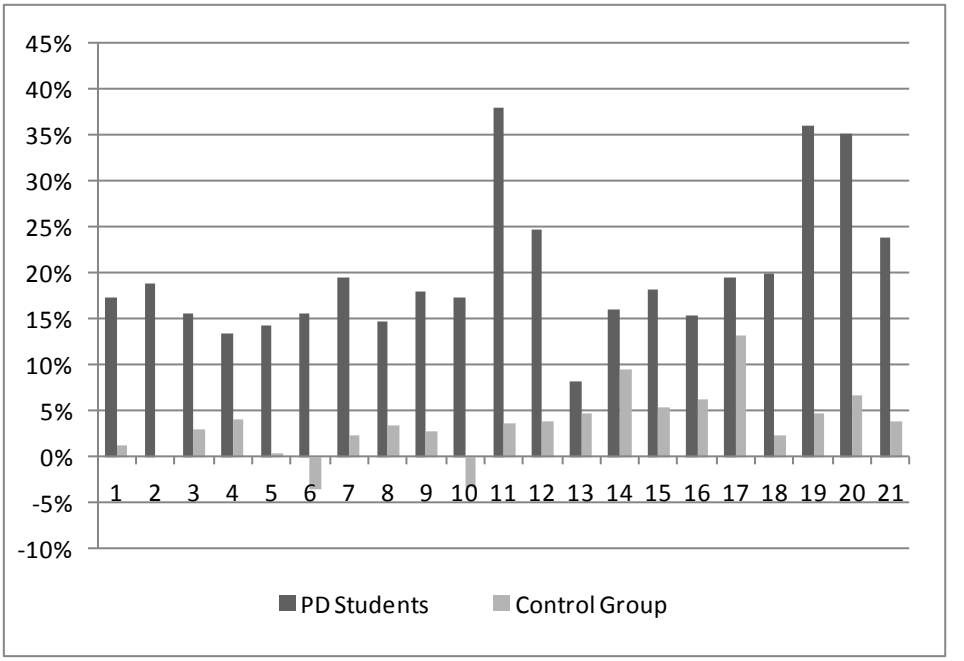

Figure 4: Percentage change in student self-efficacy over a degree program

Note: This figure presents the percentage change in the self reported level of each of the 21 self efficacy measures from the start of university in the first year compared to the end of 3rd year for the PD Students and the Control Group.

Limitations and Future Research

The primary limitations of this study include the variation in sample sizes for both student groups and the self-assessment of self-efficacy across the period studied. This limitation arises because the study does not necessarily track the same students throughout the three years, but relies on those students available and willing to complete the survey at each reporting point. The data is also based on surveys completed by the students assessing their own perception of their skills development which may not be indicative of their actual levels of self-efficacy.

Future research could include surveying students after they leave university and complete 12 months of full time employment to determine whether there has been an adjustment to their perceptions of self-efficacy. Higher education institutions that offer a similar business internship degree (with or without a supporting PDP) could also apply the survey instrument to validate or reject the findings of this study.

Conclusion

This paper assesses the impact on students' development of self-efficacy whilst completing an off-campus 24-month internship supported by an ongoing orientation program over the three year

period. This is achieved by comparing the self assessment of students in a WIL business degree with a control group of students undertaking the same degree in a traditional setting. The surveys, resulting evidence and analysis indicate that the Professional Degree has had a positive impact on students' self-efficacy. Further, the continuation of the PDP contributed to improved self-efficacy in the 2nd and 3rd years of the Professional degree.

From a vocational perspective, the results confirm that the implementation of WIL in a business degree can significantly increase students' confidence in career prospects (in this case within the accounting and financial planning professions) as well as their ability to meet the challenges of a professional environment. It is suggested that this removes a potential barrier to growth, with students have an improved sense of 'I' and their place in their future professional careers. Positive career outcomes represent one of many benefits for higher education institutions. Another benefit is that students with higher self-efficacy tend to have greater satisfaction with their academic studies which is an important measure of student retention for universities. It is the recommendation of the authors that Business faculties incorporate a continuous WIL program into their degree offerings given the potential return on investment for students, employers, universities and the accounting and financial planning professions.

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