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# Not All Dimensions of Work Self-Efficacy Are Equal: Understanding the Role of Tertiary Work Placements in the Development of the Elements of Work Self-Efficacy

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## Abstract

This paper examines the relationship between a final year tertiary work placement for criminology students at Griffith University in Brisbane and the development of their work self-efficacy. Using a work self-efficacy instrument developed by Professor Joe Raelin at Northeastern University in Boston, a pilot phase in 2006 and a larger study in 2007 investigated the students' responses across seven self-efficacy factors of learning, problem-solving, teamwork, sensitivity, politics, pressure, and role expectations. Both studies utilised a pre- and post-test and comparisons between these indicated that they believed their abilities to participate constructively in their professional work contexts significantly improved as a result of their placement experience except in the areas of learning, teamwork and sensitivity. This finding will allow us to continue to refine the processes of work placements in order to ensure the integrity of this method for student learning.

**Keywords:** criminal justice education, politics, practicum, pressure, problem-solving, role expectations, self-efficacy, sensitivity, teamwork, work-integrated learning.

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## Literature Review

Over the past 10-15 years there has been increasing pressure from the Australian Government and employer groups to have graduates *work-ready* (ACNielsen Research Services, 2000, A National Internship Scheme, 2008; Australian Chamber of Commerce and Industry and Business Council of Australia, 2002; Business & Industry and Higher Education Collaboration Council, 2007). The interpretation of the term work-ready is not conclusively agreed upon by both the higher education sector and industry. It is a term that has gathered a range of definitions in order to demonstrate either a process of meeting external agendas by the higher education sector or of trying to explain the qualities, skills, and attributes required for a new graduate to have minimal transition processes into an organisational position.

Work integrated learning (WIL) in its different forms (cooperative programs, sandwich courses, practicum, internships, etc.) is designed to assist a student to make the transition from dependent institutional learner into the role of autonomous, interdependent professional practitioner (A. Bates, Bates, & Bates, 2004). It can be designed to promote personal development, provide exposure to the *realities* of the work environment (including the socio-political elements of organisations, the demands of particular professional requirements, and the responsibilities associated with their future job tasks, to name just a few) and highlight the role of knowledge in the work place. As such, WIL research has provided confirmation that it can increase personal knowledge of the work environment, develop generic skills, and also bring experience that consolidates work-ready attitudes and behaviours (A National Internship Scheme, 2008; Crebert, Bates, Bell, Patrick, & Cragnolini, 2004). On the other hand, if this learning is not made explicit, some students may be left feeling unprepared for the contextual challenges of their first paid professional experience (McDonald, 2007).

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If we accept that WIL is the opportunity that students have to move from dependence to autonomy and interdependence, then we need to understand the important role that self-efficacy plays. Understanding self-efficacy in the context of WIL allows students to build mastery: The success that can come from a well-designed WIL pedagogy can build a robust self-belief that contributes to the quality of perseverance. Exposure to the attitudes and behaviour that are being modelled by the student's direct supervisor and work colleagues can also directly impact their self-efficacy, while verbal encouragement and validation consolidates their growing self-efficacy. Having said this, it is important that the pedagogical experience be set to challenge the learner, but not create an ongoing stressful state that maintains a high state of arousal that creates low self-efficacy (Bandura, 1994). It is important to note that work efficacy is more than just knowledge and skills but also involves a sense of belonging to a particular profession demonstrated by adopting the cultural and behavioural norms of membership (A. Bates, Bates, & Bates, 2007).

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Self-efficacy is a critical construct within social learning theory and was introduced by Bandura (1977). He used the concept as a way to describe a personal belief about the ability to perform a particular task or behaviour and believed that this was a significant behavioural determinant of a quality, such as persistence, and in the context of this paper, an indicator of whether or not a person would take a risk to develop a particular behaviour in order to increase the potential of career competency (Bandura, 1982). Bandura argued efficacy development was not static but could be developed through: personal mastery of experience, vicarious learning from modelled behaviour (including seeing people like oneself succeed), being persuaded of one's ability to succeed, and reducing stress that might promote premature failure (Bandura, 1977, 1986, 1997; Gist & Mitchell, 1992). There is a growing research base on self-efficacy and its relationship to worker confidence (Gardner & Pierce, 1998; Raelin, 2008). Additionally, previous research has identified that work placements increase a student's level of self-efficacy (Brett, Freuden-

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berg, Brimble, & Cameron, 2010; Brett Freudenberg, Brimble, Cameron, & English, 2011; Coll, Zegwaard, & Lay, 2001; Subramaniam & Freudenberg, 2007). These studies have used a general measure of self-efficacy in a WIL context rather than using a more specific measure of work self-efficacy. Work self-efficacy refers to a set of behaviours and practices used within the workplace including exhibiting teamwork, expressing sensitivity, managing politics and handling pressure.

In 2005, the first author met Raelin (Northeastern University, Boston) who had been developing a Work Self-Efficacy Inventory (WS-EI). Although there were self-efficacy instruments that investigated specific job skills or career decision-making (Anderson & Betz, 2000; Luzzo, Hasper, Albert, Bibby, & Martinelli, 1999; Paulsen & Betz, 2004), there were no known measures of self-efficacy in the specific context of work. The instrument was not specific to the WIL context but had demonstrated "higher levels of work self-efficacy for each incremental [WIL] experience" in a cohort of pharmacy students (Raelin, personal communication, August 15, 2005). Raelin's paper *Validating a New Work Self-Efficacy Inventory* (n.d.) outlined the process used to authenticate the seven dimensions of work self-efficacy: problem-solving, sensitivity, teamwork, learning, politics, pressure, and role expectations.

Raelin and colleagues (Raelin et al., 2011) have identified that work self-efficacy increases for students with work placement experience between their second and third years at university. However, their paper examined work self-efficacy as a total construct. This study will examine how self-efficacy changes within the seven sub-scales for students that have completed a WIL placement within the criminology context. It was expected that the WS-EI would assist in assessing the value of WIL for developing work self-efficacy in students beginning the process of transition to work. This in turn would contribute to their *work-readiness*.

## Method

**Participants.** The sample comprised 33 final-year undergraduate students from a WIL course in Griffith University's School of Criminology and Criminal Justice (Brisbane, Australia). The majority of participants were female (81.8%; male = 18.2%). The ages of participants ranged from 19 to 38 years ( $M = 22.8$  years;  $SD = 3.7$ ). The majority of participants had previous work experience ( $n = 18$ ; 75.0%), however, just three participants (12.5%) had previous work experience in areas relating to criminology and criminal justice. All participants were treated in accordance with the ethical requirements of the Griffith University Human Research Ethics Committee (CCJ/02/07/HREC and CCJ/05/08/HREC) and the ethical principles of the National Health and Medical Research Council.

**WIL Course.** The School of Criminology and Criminal Justice offers a 1 semester (13 week) work placement course as an elective in students' final year of study. Students who elect to participate in this course attend placement for one day per week for the 13 weeks of the semester (i.e., 100 hours) in an organisation of their choice. Students are assigned a supervisor within the organisational context as well as an academic facilitator from the University. Each student is required to complete a written project or practical task set by

*Student placements span traditional criminal justice areas of corrections, police and non-police law enforcement, and intelligence, as well as placements with a focus on social justice, which include youth justice, child protection, homelessness, and issues of mental health and alcohol and drugs.*

the organisational supervisor. A reflective learning journal is also required and complements the development of a learning plan and attendance at four reflective workshops held during the semester. The WIL course has been offered in the School of Criminology and Criminal Justice for more than 15 years. Student placements span traditional criminal justice areas of corrections, police and non-police law enforcement, and intelligence, as well as placements with a focus on social justice, which include youth justice, child protection, homelessness, and issues of mental health and alcohol and drugs. A detailed description of the WIL course is available in M. Bates (2008).

**Materials.** The present study utilised a questionnaire design. The anonymous questionnaire had two sections and took between 5 to 10 minutes to complete. The first section assessed participants' demographic characteristics (i.e., age and sex) and students' previous work experience (i.e., full-time or part-time and whether they had undertaken any previous work experience in the field of criminology and criminal justice).

The second section assessed students' self-reported work self-efficacy using Raelin's (n.d.) Work Self-Efficacy Inventory. This inventory consists of 30 items that are classified into seven factors of work self-efficacy: learning (e.g., learn to improve on my past performance; learn from my mistakes), problem solving (e.g., solve new and difficult items; invent new ways of doing things), teamwork (e.g., help build the team as a working unit; manage conflict among group members), sensitivity (e.g., listen effectively to gain information; be sensitive to others' feelings and attitudes), politics (e.g., know

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how things “really work” inside an organisation; master an organisation’s slang and special jargon), pressure (e.g., work under pressure; work under extreme circumstances) and role expectations (e.g., know what is expected of me as a worker; determine what is expected of me on a job). Participants rated their confidence in their ability to perform each of the items on a five-point scale, where 1 = not at all, 2 = a little, 3 = a moderate amount, 4 = a lot and 5 = completely. Participants’ scores for each self-efficacy factor were computed from the mean score of the items for each factor. The overall self-efficacy score was computed using the same computational method. Therefore, each of the factor scores and the overall self-efficacy score ranged between 1 and 5. Previous research has supported the construct validity and internal consistency of the Work Self-Efficacy Inventory (Raelin, n.d.). In the present study, the Cronbach’s alpha coefficients were above .7 for all 7 factors and above .95 for the total scale.

**Procedure.** Participants were recruited through the final-year undergraduate criminology course detailed above. Participants were administered the same questionnaire at two time-points; a pre-test administered prior to the commencement of the placement and a post-test administered upon completion of the placement. A unique identification code was used to match participants’ pre-test and post-test results. The response rate for the pre-test questionnaire was 63.2% ( $n = 24$ ) and the response rate for the post-test questionnaire was 86.8% ( $n = 33$ ).

## Results

The results were analysed using the statistical package SPSS for Windows, Version 15.0. A series of paired t-tests were conducted to investigate whether WIL students’ work self-efficacy improved as a result of placement experiences. A series of bivariate analyses were conducted rather than multivariate analyses combining factors (e.g., MANOVAs) on the basis of Tabachnick and Fidell’s (2001) arguments supporting this approach for factor/component scores. To protect against inflated Type I errors, Bonferroni’s adjustment was utilised with only scores below .007 considered significant (Tabachnick & Fidell, 2001). Prior to conducting the analyses, data were examined to ensure the assumptions specified in Coakes and Steed (2001) and Tabachnick and Fidell (2001) were not violated. Unless noted, all necessary assumptions were met.

**Pilot Study.** Prior to conducting the main study, a pilot study was conducted on a different sample of 22 criminology professional placement students in 2006 (78.6% response rate). Students completed Raelin’s Work Self-Efficacy Inventory once upon the completion of the placement. Here, participants indicated what they believed would have been their level of self-efficacy prior to the placement as well as their perceived level of self-efficacy on the completion of the placement. As both the pre-test and post-test measures were collected at the completion of the placement, it is possible that the pre-test estimates are confounded by other factors, such as students’ satisfaction with their placement. Nevertheless, this measure was deemed to be sufficient to provide an estimate of students’ perception of the impact of professional placements on their work

self-efficacy for the purpose of piloting the present study. The results of the pilot study indicated that students perceived that their work self-efficacy significantly improved across all of the 7 factors of work self-efficacy, as well as their overall work self-efficacy (see Table 1). Specifically, students generally perceived that they had “little”-to-“moderate” work-related self-efficacy prior to placement, but that this had improved to “a lot” of self-efficacy after the WIL experience.

Table 1.  
**Differences in Students’ Perceived Work Self-Efficacy Ratings Before and After Professional Placements Experiences, as measured on the Completion of the Placement**

Self-Efficacy Factor	Pre-Placement <sup>a</sup> <i>M</i> ( <i>SD</i> )	Post-Placement <i>M</i> ( <i>SD</i> )	<i>df</i>	<i>T</i>	<i>p</i>
Learning	3.0 (0.8)	4.2 (0.4)	21	-8.58	.001
Problem-Solving	2.6 (0.7)	3.8 (0.4)	21	-10.58	.001
Teamwork	2.8 (0.6)	3.9 (0.5)	21	-9.71	.001
Sensitivity	3.2 (0.7)	4.2 (0.4)	21	-7.37	.001
Politics	2.3 (0.9)	3.9 (0.5)	21	-11.35	.001
Pressure	3.0 (0.7)	3.8 (0.6)	21	-7.12	.001
Role Expectations	2.6 (0.8)	4.1 (0.4)	21	-10.82	.001
Overall Self-Efficacy	2.8 (0.6)	4.0 (0.3)	21	-12.24	.001

Scale: 1 = not at all, 2 = a little, 3 = a moderate amount, 4 = a lot and 5 = completely

<sup>a</sup> Both the pre-test and post-test measures were collected at the completion of the placement

**Main Study.** To investigate whether WIL students’ work self-efficacy improved as a result of placement experiences, students’ pre-placement and post-placement self-efficacy ratings were compared for those students who completed the questionnaire at both time-points ( $n = 22$ ; 57.9% response rate).

**Overall Work Self-Efficacy.** Prior to commencing WIL placements, students generally reported “moderate” overall work self-efficacy ( $M = 3.4$ ;  $SD = 0.5$ ). After completing WIL placements, there was a significant improvement in students’ overall work self-efficacy ( $t [21] = 3.73$ ,  $p = .001$ ), with students reporting “a lot” of overall self-efficacy ( $M = 3.9$ ;  $SD = 0.6$ ). To determine which of the seven work self-efficacy factors improved after WIL placements, pre- and post-placement ratings for each factor were examined individually. These results will be reported next.

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**Learning.** Prior to the WIL placements, students generally perceived that they had “a lot” of confidence in work-related learning ( $M = 3.7$ ;  $SD = 0.5$ ). Subsequent to the placements, students’ perceived confidence in work-related learning did not change significantly ( $t [21] = -2.48, p = .022$ ), whereby students still perceived that they had a lot of confidence in work-related learning ( $M = 4.0$ ;  $SD = 0.6$ ).

**Problem-Solving.** Before commencing WIL placements, students reported “moderate” confidence in work-related problem-solving ( $M = 3.1$ ;  $SD = 0.8$ ). After completing WIL placements, there was a significant improvement in students’ self-reported confidence in problem-solving ( $t [21] = -3.51, p = .002$ ), with students reporting “a lot” of confidence in this area ( $M = 3.7$ ;  $SD = 0.7$ ).

**Politics.** Students reported “moderate” confidence in work-related politics prior to beginning their WIL placements ( $M = 2.8$ ;  $SD = 0.8$ ). Subsequent to their placements, students’ self-reported confidence improved significantly ( $t [21] = -4.91, p < .001$ ), with students reporting “a lot” of confidence in work-related politics ( $M = 3.8$ ;  $SD = 0.7$ ).

**Pressure.** Prior to commencing WIL placements, students reported “moderate”-to-“a lot” of confidence in work-related pressure ( $M = 3.5$ ;  $SD = 0.7$ ). Students’ self-reported confidence in work-related pressure significantly improved after completing WIL placements, ( $t [21] = -3.25, p = .004$ ), with students reporting “a lot” of confidence in this area ( $M = 4.0$ ;  $SD = 0.8$ ).

**Role-Expectations.** Students generally reported “moderate” confidence in work-related role-expectations prior to commencing WIL placements ( $M = 3.3$ ;  $SD = 0.8$ ). There was a significant improvement in students’ self-reported confidence after completing WIL placements, ( $t [21] = -3.51, p = .002$ ), with students subsequently reporting “a lot” of confidence in work-related role-expectations ( $M = 4.0$ ;  $SD = 0.8$ ).

**Teamwork.** Prior to the commencement of placement, students perceived that they had ‘moderate’ confidence in work-related teamwork ( $M = 3.3$ ;  $SD = 0.6$ ). Students’ confidence in teamwork did not significantly improve after completing their WIL placement ( $M = 3.7$ ;  $SD = 0.9$ ;  $t [21] = -1.72, p = .101$ ).

**Sensitivity.** Prior to the commencement of placement, students generally perceived that they had “a lot” of confidence in work-related sensitivity ( $M = 3.8$ ;  $SD = 0.5$ ). After completing WIL placements, students’ perceived confidence in work-related sensitivity did not significantly improve ( $t [21] = -2.28, p = .033$ ), whereby students still perceived that they had a lot of confidence in work-related sensitivity ( $M = 4.0$ ;  $SD = 0.4$ ).

**Discussion.** The pilot study and the main study within this research identified that work self-efficacy improved for students between the start and conclusion of their placement. These support the findings of earlier research regarding WIL and work self-efficacy (Raelin et al., 2011). However, this paper, by examining the components that constitute work self-efficacy, identified that not all components of work self-efficacy increased over



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the placement period. The results of the main study within this research indicate that, while students' perceptions of problem solving, politics, pressure, and role expectations improved by the end of the placement, they did not report a statistically significant improvement in the sub-scales of learning, teamwork and sensitivity between the pre-placement measurement of these abilities and the post-placement measurement of these abilities.

This contrasts with the findings of the pilot study, where students completed both the pre- and post- surveys at the same time. The pilot study identified significant differences across all factors. It is possible that the students' satisfaction with their placement experience influenced their perceptions of their pre-placement ratings. It is a positive outcome that students believed that their placements assisted them across all elements of work self-efficacy.

Participants within the main study reported high perceptions of learning, which focuses on confidence in being able to learn productively on the job, at the commencement of the placement period, as well as at the conclusion. Therefore, the lack of improvement in this measure may be because in their role as students, participants had a strong focus on learning, perhaps as a result of the inherent and planned challenges that are inbuilt to the placement. The fact that learning did not decrease is important. A placement program that reduced students' confidence in being able to learn productively on the job would not be beneficial for inclusion in a program of study.

The teamwork factor also did not increase by a statistically significant amount when comparing the pre-placement and post-placement scores. Students within this course complete placements that require them to complete project work, usually in collaboration with their work supervisor. Therefore, the lack of improvement in this score may be related to contextual issues surrounding the study. The information reported by students in their journal was that it is difficult for them to accept that it is okay to have someone assist them with developing their work (L. Bates, 2005; M. Bates, 2008). The educational environment promotes the value of individual work or the work of individuals contributing to a team. The teamwork projects are often fraught with issues of equity in the distribution of the workload, which is a very different concept to the actuality of working collaboratively with a colleague and having them contribute to the work that an individual is completing.

There was not a statistically significant difference in students' self-reported sensitivity between the start and conclusion of the placement. This may be related to students highly ranking their own levels of work-related sensitivity at the start of the placement. Alternatively, it could be related to either the nature of the placement and the work being

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expected, or the fact that many students report in the reflective journals, which forms part of the learning process, that their focus is on managing the anxiety they are experiencing and “surviving”. This self-focus could inhibit their ability to focus on others by, for example, being able to be sensitive to the feelings and attitudes of others, listening effectively to gain information, concentrating on what someone is saying to them even though other things could be distracting or listening effectively to understand opposing points of view.

The ability to solve problems within the workplace is an essential work skill and placements within organisations offer students the opportunity to be presented with a problem, and overcome that problem, thus enhancing their belief in their ability to problem solve. Within this study, students’ perceptions of their problem-solving abilities increased from the start of the placement to the conclusion. This finding is supported by the assertion of other authors who state that work placements assist in the development of problem-solving skills (Coll et al., 2009).

The increase in students’ confidence in managing work-related politics and role expectations is probably due to the students’ lack of exposure to these elements previously. It is difficult to learn to manage organisational politics or develop an understanding of a work role while a student is at a tertiary institution. However, a WIL placement requires a student to negotiate organisational politics and fully understand their role within the organisation in order to successfully complete the requirements of the placement. By doing this successfully, students are likely to gain confidence that they will be able to do so in future employment roles post-graduation.

Most tertiary students would need to be able to manage pressure in terms of coping with time and schedule demands in managing their studies. This was supported by the “moderate” to “a lot” of confidence in managing work-related pressure ratings prior to the commencement of their placement. However, after the placement, their self-reported ability to cope with work related pressure increased further, suggesting that work placements enhance students’ ability to cope with stress. This may be because students on placement are required to manage a range of commitments such as completing coursework requirements, paid employment, and family, in addition to their placement (L. Bates, 2005).

*The results of this research are valuable not only for the curriculum of the course examined as part of this research, Professional Practice, but for other work-integrated learning courses.*

The results of this research are valuable not only for the curriculum of the course examined as part of this research, *Professional Practice*, but for other work-integrated learning courses. This research could assist educationalists to continue to develop their course content in order to develop curriculums that enhance work self-efficacy (Raelin et al., 2011) and thus the capacity of the student to build a robust self belief that contributes to the quality of perseverance.

Given that work self-efficacy can, amongst other methods, be developed through the modelling of behaviour, this research provides information that is valuable when preparing organisational supervisors for their task. Providing supervisors with information regarding the development of work self-efficacy within students on placement will help provide an understanding of the need for placements, context for their role within the placement and assist them in modelling appropriate behaviours to assist the students to vicariously learn.

This research demonstrates the importance of including WIL subjects within tertiary degrees as it provides the opportunity for students to enhance their work self-efficacy, and the various elements of work self-efficacy, prior to graduation. This finding is noteworthy given the importance of self-efficacy in developing persistence and whether an individual will take a risk to develop a particular behaviour in order to increase the potential of career competency (Bandura, 1982). The inclusion of a WIL subject within a degree therefore provides students with the opportunity to gain a critical generic skill, work self-efficacy, which will be invaluable throughout their career.

Further research will enable the development of a deeper understanding of work self-efficacy in placements. For instance, how do students improve their abilities in each of the various components? Do they learn problem solving vicariously by observing how their field supervisors approach issues? The replication of this research across different disciplines and types of placements will help identify how alternative placement structures affect work self-efficacy. Furthermore, this research considers a work placement program that was a voluntary subject within a tertiary degree. Comparing students who elected to undertake the placement and those that did not would provide greater understanding of the potential benefits of such a program in developing work self-efficacy and its various components.

Given the importance of work self-efficacy to the future careers of university graduates, it is important that universities and those that work within them identify how they can improve work self-efficacy. Work placements are one method of increasing work self-efficacy, although, as shown by this research, not all elements within work self-efficacy increase over the term of the placement. While there were improvements in the dimensions of problem solving, politics, pressure, and role expectations, there were no

statistically significant improvements in the sub-scales of learning, teamwork, and sensitivity. Identifying which elements of work self-efficacy are developed through WIL programs will enable educationalists to further enhance their programs and increase students work self-efficacy.

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**\*We would like to thank the students who kindly participated in this research.**

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**Dr. Carleen Thompson** is a postdoctoral research fellow and lecturer in the School of Criminology and Criminal Justice, Griffith University (Brisbane, Australia). Carleen has been involved in administering and convening professional practice placements for criminology students for more than 4 years. Carleen's principal research interests include work-integrated learning, risk assessment in the justice system, stalking and interpersonal violence.

**Dr. Lyndel Bates** is a lecturer in the School of Criminology and Criminal Justice, Griffith University (Brisbane, Australia). Lyndel has over 7 years of teaching experience in criminology and criminal justice including courses in research methods and forensic psychology. As part of her previous position, Research Director with the Queensland Parliamentary Service, Lyndel ran workshops for tertiary students undertaking parliamentary internships. She has also been a field supervisor for students on a work placement. Lyndel's research interests include work integrated learning, the transition from student to novice professional as well as the enforcement of traffic laws.

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- PAGE 04**     **A Comparative Study: Challenges and Opportunities for European Union Dual Vocational Training Systems**  
RIDVAN ARSLAN, Uludağ University, Turkey  
ENGİN ÖZDEMİR, Kocaeli University, Turkey  
PAT O'MAHONY, Irish Vocational Education Association, Ireland  
RICHARD PARSONS, Bleaneu Gwent County Borough Council, Great Britain  
SILVANA DI BONO, Università Degli Studi di Palermo, Italy  
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MIHA LOVSIN, Center Republike Slovenije za Poklicno Izobraževanje, Slovenia  
STEFAN SORIN MUREȘAN, University of Applied Science, Würzburg-Schweinfurt, Germany
- PAGE 19**     **Not All Dimensions of Work Self-Efficacy Are Equal: Understanding the Role of Tertiary Work Placements in the Development of the Elements of Work Self-Efficacy**  
MERRELYN BATES, Griffith University, Australia  
CARLEEN THOMPSON, Griffith University, Australia  
LYNDEL BATES, Griffith University, Australia
- PAGE 31**     **The Impact of Fashion Merchandising Internships on Careers**  
DR. JACQUELENE ROBECK, University of Louisiana, United States
- PAGE 47**     **Cooperative Education Through a Large Scale Industry-School Partnership**  
JAMES J. WATTERS, Queensland University of Technology, Australia  
STEPHEN HAY, Griffith University, Australia  
HITENDRA PILLAY, Queensland University of Technology, Australia  
NEIL DEMPSTER, Griffith University, Australia
- PAGE 61**     **“Managing with my Heart, Brain and Soul”:  
The Development of the Leadership Intelligence Questionnaire**  
ANNA M. DÅDERMAN, PhD, University West, Sweden  
MARIKA RONTY, Amfora Future Dialogue AB, Sweden  
MARIA EKEGREN, Studieförbundet Vuxenskolan and University West, Sweden  
BERTIL MÅRDBERG, LpaData AB, Sweden
- PAGE 78**     **Perceptions of Risk in Co-operative Education**  
REBECCA NEWHOOK, Memorial University of Newfoundland, Canada
- PAGE 94**     **Investigating what constitutes an effective workplace learning environment: A scoping review of the role physical and material elements play in student learning**  
FRANZISKA TREDE, PhD, Charles Sturt University, Australia

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Research reports should contain the following:

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- Introduction, review of relevant literature, context for inquiry
- Description and justification for methodology employed
- Description of research finding
- Discussion of the finds, implications for practitioners
- Conclusion and suggestions for further research

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