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Potential utilisation of assessment centre methodology to enhance student placement outcomes, experiences and employability

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**Background:** Placements are of particular importance due to the richness of learning associated with placement experiences and the wider links they represent to industry and the community. Students often refer to placements as the most significant, productive and memorable component of their training. Importantly, placements also provide the opportunity for students to become work ready, i.e., integrate their knowledge into a new set of employable skills and personal qualities. There is now increased emphasis on employability by employers and universities alike; in fact, it now represents a critical performance measure for Australian universities. Despite these key points, there appears to be inconsistencies in approaches to maximising work placements across and within Universities. Assessment centre methodology may represent a useful approach to standardise and optimise work placements for all stakeholders. Assessment centre methodology has been used successfully for selection purposes in industry for the past 50 years. However, their use as a developmental tool is less prominent. Furthermore, their application in the higher education setting, particularly in the context of placements and student development appears under researched.

**Overview of issue:** Only one published study was found that reported the use of a developmental assessment centre with a post-graduate sample. That study took place over 10 years ago when the concept of employability was still gaining recognition and work placements were less common. The current paper reviews this unique concept in the context of the existing literature and the current needs of Universities, employers and students.

**Discussion:** It is argued that the reconsideration of assessment centre methodology for development represents an innovative approach to consistently maximising work placement outcomes, experiences and employability.

**Conclusions:** Given the importance and increased use of placements, the application of assessment centre methodology within the placement curriculum warrants further research. This methodology represents a standardised approach for implementation within a range of placement programs to enhance student development, placement outcomes and employability.

**Keywords:** Assessment centres; development centres; work readiness; employability; placements.

**Introduction**

The current paper examines a topical issue relating to enhancing student placement outcomes, experiences and employability. The importance of placements as a form of work-integrated learning is discussed and established. Despite this importance, this paper argues that insufficient attention has been paid to maximising student development while on placement, which may be due to the complex nature of placements and associated curriculum challenges. The use of assessment centre techniques in a developmental context offers a valuable opportunity to address this concern and this paper explains what is involved in this methodology. This paper argues that the use of an assessment centre approach will enhance student development prior to and during placement and improve employability by providing comprehensive feedback to the student obtained via a range of assessment activities and tools, aligned with job essential competencies.

As Australia faces the challenges of potential skill shortages and internationalisation (McLennan & Keating, 2008; B. O'Connor, 2008), government, industry, and the community expect Universities to
assist by producing graduates aligned to professional and workforce requirements (Patrick, et al., 2009; M. Smith, et al., 2009). The importance of producing work ready graduates is now a prominent strategic objective of Universities. Aligned with this objective, interest in work-integrated learning (WIL) methods has surged as they are generally accepted as a superior vehicle for developing generic professional skills and improving employability for students when compared with classroom methods alone (Bleetman & Webb, 2008; Coll & Zegwaard, 2006; B. O'Connor, 2008; Patrick, et al., 2009; M. Smith, et al., 2009).

Work-integrated learning (WIL) is defined as “an umbrella term for a range of approaches and strategies that integrate theory with the practice of work within a purposely designed curriculum” (M. Smith, et al., 2009, p. 23). Of the WIL methods available, student placements are considered particularly valuable due to their direct interface with the workplace. Placements involve students being placed in an organisation to receive the practical training and experience required as part of their higher education course. Placements are also referred to by a range of terms such as internships, practicum, apprenticeships, cooperative based learning, and industry based learning (Bennett, 2009; M. Smith, et al., 2009). Placements entail extensive involvement from industry and the University and also require integrated learning between the University and the workplace (Holdsworth, Watty, & Davies, 2009; Martin, Coll, et al., 2009).

Importance of placements

Placements are becoming so prevalent in higher degree courses that Universities Australia recently advocated the use of a national internship scheme. This scheme aims to address skill shortages and student employability problems such as the insufficient generic skills noted by many graduate employers (McLennan & Keating, 2008; C. Smith, 2009). The increased use of placements in higher education is not surprising given that students often refer to placements as the most significant, productive, and memorable component of their training (Lefevre, 2005). In addition, the ability of placements to positively influence high priority areas for our economic future, such as partnerships and student employability has been widely acknowledged by industry, government and Universities (Bleetman & Webb, 2008; Huntington, Stephen, & Oldfield, 1999; McLennan & Keating, 2008; Murakami, Murray, Sims, & Chedzey, 2009; Pelech, Barlow, Badry, & Elliot, 2009; C. Smith, 2009; M. Smith, et al., 2009).

It is critical to consider the strong link between placements and the development of generic employability skills (Precision Consultancy, 2007). Although employability can be a multidimensional and complex notion (Lees, 2002), a useful definition used in the higher education sector is “a set of achievements – skills, understandings and personal attributes – that makes graduates more likely to gain employment and success in their chosen occupations which provides a flow on benefit not only to themselves but the workforce, community and the economy” (Bleetman & Webb, 2008; M. Smith, et al., 2009, p. 19). Naturally, employability is high on the agenda of many governments and employers given current and future human capital and economic related challenges (Lees, 2002; B. O'Connor, 2008). As such, the need to develop highly skilled professionals who are responsive to social, cultural, technical, and environmental change, and who are able to work flexibly and intelligently in a range of business contexts, is seen as critical (Bridgstock, 2009; Precision Consultancy, 2007). Such requirements clearly indicate the need to go beyond standard teaching methods of discipline-related knowledge and incorporate placement approaches that link more directly to employability.

It is widely acknowledged that employers now seek skills from course graduates beyond pure academic achievement or discipline-specific knowledge (Crebert, Bates, Bell, Patrick, & Cagnolini, 2004; Graduate Careers Australia, 2008; B. O'Connor, 2008; Patrick, et al., 2009). In fact, many argue that graduate attributes and generic skills are the key variable determining graduate success in the workplace (Crebert, et al., 2004). Examples of generic skills include those that facilitate coping
with the social realities of work such as the ability to communicate well, relate to others, plan and manage job demands, leadership qualities, and the ability to cope with stress (Coll & Zegwaard, 2006). Employers are seeking graduates equipped with specific discipline knowledge as well as various professional and generic skills to deal with complexity, solve problems and communicate effectively (Murakami, et al., 2009). This theme, coupled with the fact that graduates and employers overwhelmingly endorse work based placements as a means to develop attributes thought to be integral to success at work (Crebert, et al., 2004), clearly justifies the importance of considering the employability agenda within strategies to enhance placement outcomes.

**Placements – current challenges**

Despite the importance of placements, it is of concern to note that there does not appear to be a consistent or widely recognised approach to maximising work placements across or within Universities (Bennett, 2009; Bullock, Gould, Hejmadi, & Lock, 2009; Coll, et al., 2009; Martin, Coll, et al., 2009; Patrick, et al., 2009). In fact, it has been argued that despite the critical learning obtained from placement experiences and the preparation of students for placements being very important areas (Huntington, et al., 1999; Richmond & Sherman, 1991), these topics are under researched and the associated pedagogies not well understood or consistently endorsed (Bullock, et al., 2009; Coll & Zegwaard, 2006; Murakami, et al., 2009; L. O'Connor, Cecil, & Boudioni, 2009).

One hypothesis for the lack of consistency is the complexity associated with placements. This intricacy is largely due to the unique nature of placements when compared to standard university subjects. One reason for this point of difference is the involvement of an additional stakeholder group, the industry partner providing the placement. Successful placements are dependent on effective partnerships between all stakeholders involved and to ensure all benefit, placements need to be well developed and collaborative (Wilkinson, 2008). It is therefore critical to manage expectations of all placement stakeholders to ensure valuable placement experiences and outcomes are achieved (Knight, 2006). Furthermore, given the diverse groups involved in these partnerships, the alignment of expectations is not usually straightforward. For example, studies in this area have typically found that industry partners exhibit differences in opinion regarding the nature and purpose of generic graduate skills and there is often conflict between University and workplace expectations (Coll & Zegwaard, 2006; Crebert, et al., 2004; Owen & Stupans, 2009).

Another reason for their uniqueness is that placements possess a variety of simultaneous benefits not only for industry partners and universities, but for students as well. In relation to students, Coll, et al. (2009) identified and summarised a considerable number of benefits linked to placements and categorised these into four areas. The first category is related to academic benefits such as increased discipline thinking, motivation to learn, and classroom performance. The second area identified was personal benefits such as enhanced self efficacy, interpersonal relationships, self confidence, and initiative. Thirdly, the category of career benefits was identified, which included the opportunity for career clarification, discipline specific practical experience, and enhanced employability. The last category referred to was work skill development benefits and included aspects such as developing work ethic, knowledge of organisational culture, and exposure to industry.

A further form of placement complexity is due to the wide variation that occurs within placements. For example, students are likely to be working in different organisations, working for different supervisors, and working on different projects within their discipline. In other words, the experiences of each student can be varied and dependent on a range of factors (Crebert, et al., 2004; Huntington, et al., 1999; Martin, Coll, et al., 2009; Murakami, et al., 2009; Owen & Stupans, 2009). Such diversity can make standardisation for the purposes of assessment or development of student learning extremely difficult.
The complex factors described thus far are linked to a number of challenges for placements must be addressed to further realise benefits for all stakeholders. Upon review of the literature, a key theme relating to the improvement of placement experiences is the need for enhanced and explicit structural and foundational supports to enhance learning and integration. For example, a common criticism is the use of implicit rather than explicit methods in consolidating placement learning, which leads to the inconsistencies of placement pedagogies, experiences, and outcomes (Martin, Coll, et al., 2009; Owen & Stupans, 2009).

The need to enhance learning on placement via explicit reflection techniques was also suggested by Crebert et al. (2004) who surveyed graduates from three schools who had participated in placements to determine their perceptions on the contributions that university, placement, and post-graduation employment made to the development of their generic skills. Supplementary focus groups were also conducted with employers and graduates. In the findings, students confirmed the need for deliberate and critical reflection opportunities to ensure learning prospects from placements were capitalised on. Although the idea of reflection is not new and its importance is discussed frequently in placement literature, it was perceived that insufficient structure and preparation is provided by Universities in this area (L. O'Connor, et al., 2009; Owen & Stupans, 2009). To optimise learning opportunities from placements, students need to be capable of contributing to the workplace environment and be encouraged to reflect on their experiences in an effective way (Martin, Fleming, Zinn, & Hughes, 2009). It was concluded that Universities need to do more to incorporate and structure collaborative learning opportunities into placement learning aims and objectives for students.

Challenges aligned with these ideas were also identified by Owen and Stupans (2009) who conducted a research study to map experiential placements across Australian pharmacy programmes. A variety of methods was utilised including interviews, programme mapping, consultations with over 250 participants, and analysis of handbooks. In their review of the literature and via their own research, Owen and Stupans concluded that to take full advantage of placements, there was a need for greater goal clarity and improved scaffolding at pre/during/post placement stages. They argued that although learning can occur spontaneously in any environment, the use of scaffolding which involves structured planning within a specific context can greatly accelerate the learning process.

An additional priority identified in the two above mentioned studies was the importance of building student and supervisor skills in reflection and feedback. Specifically, University and workplace supervisors need to take more responsibility for planning the experience, increasing the student’s awareness of the experience and providing robust feedback regarding the student’s performance (Owen & Stupans, 2009). It was recommended that academic staff need to further encourage students to seek out and negotiate opportunities for skill development and formalise these processes (Crebert, et al., 2004). It is not clear, however, what reliable and valid methods are available to assist supervisors in this important task.

To address the challenges described, it appears time for new approaches and thinking within the placement curriculum. When the strong value and benefits of placements are considered alongside their expected usage increase, investigation into how to consistently capitalise on placement experiences appears well warranted and overdue. It is proposed that the incorporation of assessment centre techniques, as they relate to development specifically, could offer a valuable approach to addressing the concerns described thus far.

Assessment and development centres

Assessment and development centre techniques have been utilised extensively in organisational settings for the past 50 years (Briscoe, 1997; Lievens, 2001; Waldman & Korbar, 2004; Woodruffe, 2007). Although the assessment centre method is best known for its powerful contribution to recruitment and selection in industry (Mayes, 1997), they have gained some recognition for their
value and potential merit as a robust developmental tool (Bartels, Bommer, & Rubin, 2000; Boehm, 1985; Engelbrecht & Fischer, 1995; Howard, 1997; Kottke & Shultz, 1997; Mayes, 1997). There is a vast array of research attesting to the quality of information that can be gained from well designed centres, including their high reliability and validity (Howard, 1997; Lievens, 2001). In particular, assessment centres have been shown to have very high criterion-related validity in that they correlate very highly with potential and performance ratings (Howard, 1997) and may predict graduate employability and career success (Waldman & Korbar, 2004). Specifically, it has been suggested that assessment centres could be used to measure the work readiness of students and the effectiveness of Universities in helping students develop job relevant skills (Kottke & Shultz, 1997; Waldman & Korbar, 2004).

An assessment and development centre is often described as a place, but it is actually a process. These centres employ a variety of assessment techniques to provide participants with the opportunity to demonstrate, under standardised conditions, essential job related skills/dimensions, abilities, and competencies (Kottke & Shultz, 1997). Some examples of job related dimensions/competencies typically assessed include oral communication, written communication, interpersonal effectiveness, strategic thinking, and problem solving and analysis. Although assessment centres can include formal tests such as personality and cognitive ability measures (Howard, 1997), the true hallmark of this method is seen to be its use of behavioural or performance based exercises or simulations (Waldman & Korbar, 2004). Examples of simulations include an in tray (i.e., a variety of information the participant has to review and sort which simulates problem solving and written work), a meeting with a customer, superior, or subordinate to deal with a particular issue (i.e., use of a role player to simulate meetings with individuals) or a group meeting (i.e., to simulate group problem solving and meetings). Participants take part in these simulations and their performance is observed, recorded and integrated against the essential job components to give accurate information on current or potential competence (Woodruffe, 2007).

Although it is possible to think creatively in the design of a centre, there are certain rules that must be followed to ensure the robustness and validity of data and outcomes (Howard, 1997; Woodruffe, 2007). The literature provides an extensive discussion of the generalisations that must be present for a process to be considered a valid assessment centre (Howard, 1997; Lievens, 2001; Woodruffe, 2007). In summary, firstly, they must use dimensions relevant to job success which are identified via an appropriate method, including job analysis techniques. A comprehensive job analysis is essential to obtain an accurate specification of what will be measured at the centre and is considered one of the most crucial aspects of the process (Woodruffe, 2007). Second, assessment techniques must be designed to elicit information on these dimensions/competencies and multiple techniques must be used. Thirdly, multiple assessors should be used to observe and evaluate participant performance. These assessors must receive training and be competent in the skills of observation and rating behaviour. Lastly, a systematic procedure needs to be utilised to record observations, and all data must be pooled by a meeting of assessors or statistical techniques to ensure an integrated picture of participant performance. To ensure enhanced learning outcomes, it is also important to provide adequate feedback to participants, particularly in a developmental setting so that participants accept the feedback and have opportunity to take adequate action on the results (Boehm, 1985). The adherence to these generalisations ensures that, despite flexibility in their design and potential application areas, consistency and robustness of assessment centre data and outcomes remains paramount.

Despite research in industry substantiating their use and value, the limited use of assessment and development centres in academic settings has been acknowledged (Bartels, et al., 2000; Waldman & Korbar, 2004). The majority of assessment centre techniques that are utilised in higher education appear to be purely for assessment or grading purposes and mainly with undergraduate students in business settings, rather than for development purposes (Bartels, et al., 2000; Riggio, Mayes, & Schleicher, 2003). This limited use is despite promising results obtained in academic settings. For example, Extejt and Forbes (1996) investigated the impact of a multi-method development program
on management skills with undergraduate business students in an academic setting. Participants who took part in the assessment centre alone produced more positive changes than those participants who only participated in the management development program. It was found that the knowledge of results led to improved student performance, and participation itself was perceived not only as a positive learning experience and skill development exercise, but it also enhanced their motivation for subsequent programs. In addition, Waldman and Korbar (2004) demonstrated that an assessment centre can be successfully developed for the purpose of measuring student learning outcomes as well as practical, work related competencies required for success in real world occupations. They suggested that an assessment centre may have valuable developmental application as it can assist students to better target developmental planning and steer careers accordingly prior to graduation. In line with this, research suggests that assessment centres when utilised for development can provide a number of benefits including providing the opportunity to see how an individual performs in a work situation as well as providing participants with insights into their strength and development areas, thereby helping them to target their training and improve their performance (Howard, 1997). The developmental centre process assists in awareness building and motivation to improve, as it has been found that people are more open to developing themselves when they know their developmental needs (Mayes, 1997).

Despite suggestions regarding how assessment centres may be valuable for student development (Waldman & Korbar, 2004), only one published study was found that reported the use of a developmental assessment centre with a post graduate student sample who complete placements as part of their course. Kottke and Shultz (1997) designed and implemented an assessment centre for developmental purposes with organisational psychology students as part of a practicum course requirement. To develop the centre, graduates of the course and their supervisors were interviewed to identify the core competencies required for success relating to this field. Six competencies were identified: written communication; oral communication; problem solving; organising; interpersonal; and organisational survival skills. To measure these skills four activities were designed: a leaderless group discussion; an oral presentation; an in-basket; and a role play. Assessors were trained prior to the centre and rated the students on the competencies during the activities. Written feedback was provided to students to use in career development planning. Benefits of the centre included the provision of rich developmental feedback to students and the identification of group development needs for the curriculum. It is important to note that this study took place over 10 years ago when the importance of placements, including their link to partnerships and employability, was still gaining recognition and prominence. In addition, this study did not monitor student progress throughout placements and adjust developmental planning accordingly. As such, the potential benefits of this approach may not have been fully recognised at the time and now represents an opportunity for further investigation.

Potential benefits of a development centre within placement curriculum

Utilising an assessment and development centre approach as part of placement curriculum, specifically prior to placements, will provide numerous benefits that address a number of the priorities and concerns described. With respect to the need to augment placement experiences and outcomes more consistently across disciplines, assessment and development centres have a role to play here as they have broad applicability to all academic programs that teach applied material (Kottke & Shultz, 1997). Despite being flexible and adaptable to suit just about any course (Riggio, Aguirre, Mayes, Belloli, & Kubiak, 1997), their design and application principles still ensure a systematic and proven approach in the identifying and assessing of job relevant competencies and skills.

Assessment and development centre techniques can also help address the need to make competencies, job relevant skills, and placement learning more integrated and explicit. This is because the basic foundation of assessment centres is about following a robust process to identify, assess, and communicate dimensions required for job success. Identifying these essential success factors early in
the placement program and using formal processes to assess them ensures they are made explicit to all stakeholders and improves the alignment of developmental requirements across the length of the placement program. In this way, an assessment and development centre may help to provide valuable development scaffolding to further support placements.

The focus on essential job dimensions in assessment centres also represents a direct link to the employability agenda. This is because assessment centre techniques are seen to be useful in evaluating specific skills that cannot be easily assessed by traditional methods such as exams (Howard, 1997; Riggio, et al., 1997). This includes skills most often seen to be related to job success such as interpersonal skills and teamwork (Waldman & Korbar, 2004). For example, in a comparison of traditional classroom measures of student performance with those provided via an assessment centre with undergraduate business students, Bartels, et al. (2000) found that assessment centres measure domains consistent with traditional measures but go beyond in providing a higher level assessment of skill acquisition. Further, when assessment centre methods are used for the purpose of diagnosing individual development areas, this methodology has advantages over measures that are not easily developable, such as cognitive ability, as it can be ensured that the dimensions being assessed are areas that can be developed and linked to job-relevant areas (Howard, 1997).

Another key improvement area for leveraging placements was the need for improved feedback mechanisms and partnerships. However highly skilled a student is, it is unlikely that they will possess all the competencies required and individuals then need to be prepared to recognise the skills they lack and be clear about the corrective actions that can be implemented (Knight, 2006). Assessment centres are seen to be a useful tool to provide students with meaningful behavioural feedback on their strengths, development needs, and recommendations for professional development (Bartels, et al., 2000). Given placement supervisors are an important provider of this feedback, it is critical then that they have valid data and processes to base their recommendations upon that is accepted and trusted by the student. This notion is important as it has been noted in the literature that for effective learning to take place within placements, two key dynamics are required: an open and collaborative partnership, and a supportive and nurturing approach between the student and practice teacher. These two areas help to encourage student empowerment, confidence, and trust to expose themselves to being assessed so that reflective learning can occur effectively (Lefevre, 2005).

This approach may also enhance organisational partnerships where placements occur. With accurate data on strength and weaknesses, Universities can ensure that students are better matched to placements and are clearer about their placement goals, which will assist in their supervision and negotiation of skill development opportunities. Furthermore, the use of defined competencies enables industry partners to be aware of such expectations as well. For example, industry partners can be interviewed as part of the competency design phase as well as being invited to participate as assessors for the actual assessment centre. Such involvement enhances partnerships by clarifying and confirming expectations of all parties involved.

**Limitations**

Although numerous benefits of embedding a developmental assessment centre approach have been discussed, it is important to be aware of the potential limitations of this approach. Firstly, it has been widely noted that the design and implementation of assessment and development centres can be very resource intensive and costly (Kottke & Shultz, 1997; Mayes, 1997; Riggio, et al., 2003). The reason for this expense is due to factors such as the time involved in their design, training and use of multiple assessors, conducting the centres themselves, the turnaround of results, and provision of feedback. In fact, in relation to assessors, it has been specifically recommended that psychologists need to play a key role in assessor teams for developmental purposes (Lievens, 2001). The positive aspect though is that when such centres are conducted in an academic setting, there is potential to access a wide range of professionals and expertise including psychology. The factors described cannot be compromised.
as the success of the process is highly dependent on the quality of the design and assessors utilised so it is critical to ensure these elements are conducted effectively (Kottke & Shultz, 1997). Despite this limitation, to reduce costs and resources associated, technology may offer some important avenues in this area. For example, the use of video-taping technology may be valuable for consideration as it allows further flexibility around time and resources (Howard, 1997; Mayes, 1997).

It is also important to remain cognisant of the assumptions behind the assessment centre approach, namely that participants should be able to improve on the competencies measured, are motivated to do so, and have opportunities to enhance the skills measured by the assessment and development centre (Boehm, 1985; Jones & Whitmore, 1995; Kottke & Shultz, 1997). Again, the design of the skills to be measured is critical as they need to be geared towards areas that are changeable. Program evaluations should be utilised to measure the degree of effectiveness of such programs (Boehm, 1985; Jones & Whitmore, 1995). Thus, for true learning and benefits to occur, it is not enough to just conduct the centre; the feedback and evaluation components are also critical (Boehm, 1985; Extejt & Forbes, 1996; Howard, 1997).

Despite these potential limitations, it has been acknowledged that assessment centres are well worth their expense (Kottke & Shultz, 1997; Riggio, et al., 2003). Assessment centres are seen to have distinct advantages over other methods given the comprehensive diagnosis it provides to guide development (Howard, 1997). In addition, it has been found that despite finding them challenging, participants like such centres, believe they measure job relevant areas, see them as fair and feel participation in them made them better prepared for the business world (Howard, 1997; Riggio, et al., 2003). Even university staff, who are expected to generally be less positive about such a time intensive approach, have been found to see them as a beneficial exercise (Riggio, et al., 2003).

Conclusion

With the above points of this review taken together, it is the proposition of this paper that the use of a targeted developmental assessment centre which assesses student performance on a number of job-relevant competencies will enable improved placement matching, developmental planning during placements, enhanced learning outcomes, and work readiness. Furthermore, for students, it is expected that the assessment centre will result in effective insight into their strengths and areas for development, the potential requirements of employers, needs of professional practice and enhanced employability. The employment of a developmental assessment centre approach to placements will enhance the development of graduate skills. This in turn will lead to significant external impacts, including increased confidence and skill levels resulting in better outcomes for employers, industry and the professions of which students are a part. For Universities, such an approach will result in improved teaching as there will be a better understanding of the strengths and weaknesses of each student (both individual and from a group perspective); allowing placement supervisors to place each student in a placement relevant to their skill level and support needed, and enable specific developmental strategies to be put in place for each student to ensure that, at the conclusion of the degree, all students demonstrate sufficient competency levels in areas not traditionally assessed or developed through academic study. Partnerships can also be enhanced with students, government, industry, and other stakeholders beneficial to the university, as open communication will be fostered regarding development needs which ensures alignment of expectations.

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