1-1-2014

Undergraduate perceptions of the development of team-working skills

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The ability to work effectively with others is acknowledged as critical in graduates from all disciplines and is typically considered one of the most important skills when graduates enter the labour market (Australian Association of Graduate Employers [AAGE], 2011; Confederation of British Industry [CBI], 2011; Hart, 2010). Graduate mastery of effective team-working skills appears to be a global concern with documented industry needs extending beyond Western, developed economies to Eastern Europe and Central Asia (see Sondergaard and Murthi, 2012) and China (Zhu *et al.*, 2011). Graduate ability to interact productively and effectively within a culturally diverse workforce, often spanning a multitude of generations with competing priorities and varying characteristics (Bennett *et al.*, 2012), is imperative in the modern world of work. Team-work is now one of the most heavily invested in skills in the corporate sector (Hart, 2010).

Working effectively with others (WEWO) forms one of a broad set of interrelated employability skills – otherwise referred to as non-technical, generic, core or professional skills – typically considered to enhance graduate work-readiness. Industry expectations of graduates equipped with the employability skills necessary to apply their disciplinary knowledge and skills upon entering the workforce continue to gather momentum around the globe. Higher education's response has been significant, including the resourcing of initiatives such as 'stand alone' programs explicitly developing employability skills, embedding skill outcomes into core undergraduate curricula and/or incorporating work placement – or work-integrated learning (WIL) – opportunities in curricula. The past ten years has seen a growing proliferation of such practices in higher education, in addition to increasing attention to employability skills in professional association accreditation criteria

and academic learning standards (Australian Learning and Teaching Council [ALTC], 2010) which determine undergraduate program learning outcomes.

Resistance to what some see as higher education's pandering to industry idealisations, described as the 'McDonaldisation' of higher education (Rabasso and Rabasso, 2010), is evident in academe. Schwartz (2010) argues skills-based education will never be enough as required skills vary with job design and evolving economic and environmental characteristics. Others argue introducing the skills agenda into higher education detracts from liberal education which better fosters the creative thinkers of tomorrow (Hovland and Schneider, 2011). Although this resistance prevails among academics, the majority in Australia accept the drive for skill development in higher education (De La Harpe and David, 2012).

With this, there has been considerable attention to pedagogical practices for effectively developing skills in the university classroom. Authentic learning; capitalising on a close synergy between the classroom and workplace settings in terms of curricula content and learning and assessment activities; incorporating professional learning activities such as case studies, industry simulation, mentoring and industry competitions (Lawson *et al*., 2011); and active, student-centred learning focusing on peer collaboration and feedback from multiple sources (Rosen, 2012) are all examples of pedagogical approaches to skill development. Proliferating attention to the development and assessment of skills applies equally to WEWO. The foci of recent articles on developing team-working skills in undergraduates are team formation and heterogeneity of composition (Oakley *et al*., 2004; see Richter and Paretti, 2009); benefits of team-based learning (see Schultz *et al*., 2010); managing social loafing (see Jassawalla *et al*., 2009); overcoming challenges and resistance to small-group learning

(see Shimazoe and Aldrich, 2010); group work patterns and individual member behaviours (see Houldsworth and Mathews, 2000) and the role of Faculty (see Peterson, 2012). There continues to be considerable discussion among education and professional practitioners as to how best develop the WEWO skill set and whether it can actually be taught effectively in the classroom or if, in fact, real life experience is required (see Daniel, Arce and Gunn, 2005; Rousseau, Aube and Savoie, 2006).

Progress in developing skills is hampered by a lack of clarity on how to best assess employability skills in the university classroom. Notoriously ambiguous by nature, skills can be interpreted differently by stakeholder groups − including industry, academics and the undergraduates themselves. Although skill frameworks have largely been developed to resolve ambiguities and articulate the precise nature of targeted skills, these must proffer detailed descriptors of measurable behaviours to clarify what constitutes mastery of the defined skills. Hughes and Jones (2011) note ambiguity surrounding team-work more particularly concerns constructing learning and assessment activities which address the overall team's effectiveness or individual member contribution. Further, the need for a more process-oriented approach to skill development is advocated by Riebe *et al*. (2010) and De La Harpe and David (2012) who lament the outcomes-focused approach to undergraduate skill development.

Regarding assessment, Hampson and Junor (2010) highlight the need to define the different attainment levels of skills as students progress through their studies. These will articulate a benchmark standard of what is expected of different year groups and will facilitate the constructive alignment of learning outcomes and assessment activities (Biggs, 2006) and identify opportunities for scaffolding skill development in a sequential manner. Related to

this is the emergent use of rubrics (Harvey *et al*., 2012), skill audits (Hughes and Jones, 2011) and skill portfolios (Oliver and Whelan, 2011) in measuring skill attainment. Their limitations through reliance on self-assessment and peer assessment for gauging skill outcomes are noted by Allen and van der Velden (2005). Despite concerns with self-report data, hearing the student voice on perceived capabilities is important given literature on graduate skills is largely dominated by employer and academic perspectives. Facilitator-based assessments include written tests (Hughes and Jones, 2011) and interviews (Jung, 2011).

Despite considerable research and interest in the area of fostering developing the WEWO skill set, there is some evidence to suggest a shortfall between higher education provision and industry expectations in the UK (CBI, 2011) and China (Stivers *et al*., 2007). It is important to note variations in graduate performance in behaviours within the WEWO skill set. For example, Jackson and Chapman (2012a) found employers and academics perceived Australian business graduates to be weaker in the areas of conflict resolution, social intelligence and negotiating with others yet stronger in their ability to collaborate on tasks, manage cultural diversity and create a respectful and supportive team environment. Evidence suggests Australian graduates' WEWO skills meet average expectations but only a small majority (59%) believe average expectations are exceeded (Graduate Careers Australia, 2011). In the US, graduate team-work skills are considered deficient (Casner-Lotto and Barrington, 2006; Hart, 2010). Ambiguity in skill definitions and varying stakeholder interpretations of the meaning and application of defined terms, in addition to the high priority assigned to team-work (see Lowden *et al*., 2011), urges further investigation.

The aim of this study is to examine the development of WEWO skills in Business undergraduates completing a core, stand-alone employability skills program in an Australian university. More specifically, the research objectives are:

1.   To gauge undergraduate perceptions of how well the skills program is addressing targeted WEWO behaviours.

2.   To identify those pedagogical practices considered by undergraduates to add most value in developing the WEWO skill set.

Research objectives are addressed using data gathered from a skills audit of 799 Business undergraduates completing this program which comprises four sequential units; two from the first year, one from the second year and one from the third year of study. Students must complete the first unit before proceeding; each unit being a prerequisite to the following unit. Program content is constructively aligned to an employability skills framework comprising ten skills and forty constituent behaviours. The framework, see Table 1, was developed from Jackson and Chapman's (2012b) competency framework which derived from a review of recent literature on industry-relevant graduate employability skills (Jackson, 2010). A program-level mapping exercise identified each unit's content was addressing three to five core skills, indicated in Table 1. For further discussion of the relative importance of these ten skills, and differing perspectives on current graduate performance, see Jackson and Chapman (2012a, 2012b).

[**Insert Table 1**]

WEWO forms one skill within the framework and has six associated behaviours which, together, demonstrate mastery in working effectively with others (see Table 2). It is a core

skill for the first three units in the program. The WEWO behaviour descriptors intend to alleviate issues with misinterpretation of the actual meaning of skills, widely acknowledged as problematic in studies evaluating skill performance at university and in the workplace (Barrie, 2006). A previous evaluation of how students completing the employability skills program perceive their capabilities in performing the skills defined in the framework indicated cultural and diversity awareness, team working and task collaboration were among the top ten of all forty behaviours yet conflict resolution featured in the bottom ten (Jackson, 2012). This highlights possible disparities in graduate performance in the different WEWO behaviours and the need to consider their development individually rather than as a homogenous set.

[**Insert Table 2**]

In the audit, students self-assess their ability to perform the behaviours within all ten skills and then consider how well only the behaviours within the assigned core skills of their unit were developed. The intention is evaluate the effectiveness of the program, develop important meta-cognitive skills through reflection on their learning and achievement, and generate longitudinal tracking data on individual skill outcomes. This paper is structured to first outline the adopted methodology; it then presents and discusses the results, followed by implications of the findings and a discussion of the study's limitations and directions for future research.

Method

Of the 1201 students enrolled in the skills program, 799 completed the skills audit and consented to aggregating their responses for research purposes. Table 3 summarises the sample's demographic and background characteristics. The skills audit comprises an online

survey instrument which was pretested among business academics prior to implementation. The audit firstly captured demographic and background data before asking participants to rate on a scale of one to 10, one being the lowest and 10 being the highest, how well their particular unit developed its core skills. Focusing specifically on WEWO, which is core to Units One, Two and Three, respondents then assigned a rating of one to 10 for each of the six constituent behaviours. Finally, participants were asked to describe one way each of these behaviours was developed in their particular unit. The behaviour descriptors for each skill set formed the items used in the survey instrument. For example, the descriptors for the WEWO skill set (see Table 2) were the items used by participants to rate core skill development for their particular unit.

[**Insert Table 3**]

Students are introduced to the skills framework in Unit One, and it is regularly utilised and reinforced in the subsequent units, overcoming concerns with ambiguity in interpretations of behaviour meanings. For WEWO, Cronbach alpha values for quality of skill development ratings ranged from .871 to .898, indicating internal consistency among the items. The framework, and therefore the audit instrument, is deemed to provide a reliable set of measures for the WEWO skill set. Further, the correlations between the items (WEWO behaviours) and the scale (WEWO skill set) were all significant and ranged from .745 to .802; confirming the six behaviours are measuring the same construct.

All students enrolled in the employability skills program were invited to complete the audit electronically during a six week period between April and June 2012. There was no more than a two week time lag between the first and last student completing the audit within each unit. Both on and off-campus students were invited to participate; the former during class

sessions and the latter via electronic mail and the unit's learning management system. Time was allocated during class sessions for on-campus students to complete the audit and it was integrated into weekly activities for those studying off-campus. A range of descriptive and inferential multivariate techniques were used to address the first research question using SPSS software.

To address the second research objective, a detailed coding exercise was undertaken using the grounded theory approach (Glaser and Strauss, 1973) whereby a series of open inductive coding was undertaken utilising a constant comparison method. Each statement from each student was coded by comparing the events and actions in the statements to decide which of them belonged together. Axial coding was then employed to group commonalities amongst the open codes into thematic categories which reflect important aspects of pedagogical practice that influence students' perceptions of the development of the WEWO skill.

Results

Objective one

Table 4 summarises the composite mean score for the behaviour ratings for each core skill across the four units. The results are positive and suggest students generally consider the program to be effective in developing employability skills. Focusing on WEWO, the mean and standard deviation for each of the behaviours for Units One, Two and Three (to which the skill set is core) are presented in Table 5. Again, overall the results are strong yet there is a pattern emerging with social intelligence, influencing others and conflict resolution consistently rating below the average for all three unit cohorts. Conversely, task collaboration attracts the highest mean rating across all three unit cohorts. Fostering task management through collaboration is a key focus of the program but the behaviour also

represents a more tangible and measurable outcome with task completion equating to defined learning outcomes. This may provide some explanation for student perceptions of superior skill development in this area.

[**Insert Table 4**]

[**Insert Table 5**]

Objective two

As noted above, students were asked to describe one way that each of the WEWO behaviours was developed in the unit they were studying. Overall for the WEWO skill set there were 773 responses (360 in Unit One; 226 in Unit Two; and 187 in Unit Three). Not all students commented on all behaviours and some made multiple comments on certain behaviours. Responses were coded by events and actions identified in the statements across the WEWO skill set as a whole, and then grouped by commonalities into thematic categories reflecting the key aspects of pedagogical practice which influenced their perceptions of WEWO skill development. These included: collaborative class activities; assessment items; the use of virtual learning tools – for example through discussion boards and team wikis; and demonstrating specific behaviours. A sample of responses has been included to give voice to student perceptions of how they believe the skill had been developed in the units.

Across all the units, the majority of responses referred to collaborative activities with participants highlighting specific tasks undertaken in classroom sessions where they had to work with a range of fellow students as having the most influence. For example, *"in each class, there is always a group activity designed to test, improve and reflect on certain skills associated with the program, e.g. the group activity where we had to pick and guess how many [origami] sampans our group would make in a certain amount of time, this tested*

working effectively as a group, team work skills and problem solving skills" (Student response, Unit One). Others spoke more broadly on how the range of activities were structured to assist them in developing the individual behaviours, *"throughout the unit we did a number of group tasks and activities mixing with people from different cultures, to complete these enabled me to learn how to work productively with people from diverse cultures"* (Student response, Unit Three).

Significantly, students also strongly linked the development of the WEWO behaviours to the completion of assessment items. *"In reference to our 4th assessment, to achieve the best possible result, communication is essential between the members. Through discussions we can arrange and plan meetings, allocate responsibilities, negotiate agreements and help each other to develop our own understanding of what it is like to work within a team environment where meeting objectives is a priority and deadlines are the norm"* (Student response, Unit One); *"These processes were developed extensively through the weekly group meetings for the business project. Collaboration skills and behaviours were exercised and developed during the in-class meeting, and also when my group scheduled meetings outside class time"* (Student response, Unit Two).

Separate to the statements directly made about assessment items, though inextricably linked due to their requirements, were comments highlighting how the use of virtual learning tools, such as discussion boards and wikis, assisted in developing WEWO behaviours such as task collaboration, team working, social intelligence and influencing others. *"The team-wiki makes me improve my collaborative communication and critical thinking skills, and in sharing our opinions"* (Student response, Unit Three); *"Discussion threads - allowed all participants to convey their voice in an environment with no judgment; each individual was*

treated equally and fairly; we learnt to provide critical feedback, reasons why we may think a certain way and provide evidence to support our voice" (Student response, Unit One). These are important communication tools and, through the coding of responses, it was evident that students noted how the WEWO behaviours were developed through the use of other skills aligned to the program, with communication, problem-solving and self-management the most often referred to.

Discussion and implications

Employability skill development in the program is rated highly by participants. This applies across the program's skills framework with WEWO being no exception. The importance of nurturing these skills is acknowledged yet there are difficulties in fostering them effectively in the university classroom (Callanan and Perri, 2006). Consistently lower mean scores in influencing others support Lang's (2009) assertion of gaps in addressing this skill in undergraduate curricula. Further, it aligns with evidence of graduate inability to grasp negotiation skills and the ability to influence others in the workplace (Institute of Directors [IOD], 2007). Relatively weak development of conflict resolution and social intelligence also supports evidence of poor graduate performance in these areas (Jackson and Chapman, 2012a).

The need for future managers and leaders who can negotiate and influence in an effective yet sensitive manner is widely acknowledged (Fisher, 2011), highlighting a key area for academic and professional practitioners to collaboratively address. Difficulties in learning these skills in an academic setting are noted (see Avruch and Nan, 2013) and although many students in this program did make reference to how they practiced and developed the behaviours of social intelligence, influencing others and conflict resolution in their unit, their

lower mean scores do suggest the ways in which they are taught, practiced and assessed could still be improved. Industry input – through the provisions of case studies or real exposure to professional contexts - to provide authenticity to learning and assessment is invaluable in these areas. It should also be noted, however, that in all three of these behaviours, the mean score was higher in Unit Three than it was in Unit One, indicating that perhaps that these skills do require time and practice to develop and that program was assisting to some degree. On the contrary, task collaboration attracts the highest ratings across the cohort, possibly suggesting that more tangible behaviours may be perceived as more easily achieved, particularly through the undertaking of activities, tasks and assessments, and therefore better developed.

Overall, the qualitative findings indicate the important role of constructive alignment in the development of employability skills at an undergraduate level, with empirical evidence linking student perceptions of developing WEWO behaviours with pedagogical practices of class activities and assessment items. Constructive alignment is a principle used for devising activities, and assessment tasks, that directly address the learning outcomes intended (McLoughlin, 2001) in a way not typically achieved in traditional lectures, classes and examinations. Ramsden (1992) indicated that "from a student's point of view, the assessment always defines the actual curriculum" (p. 187). Similarly, Boud and Associates (2010) have proposed that assessment is an integral aspect of curriculum design and must be aligned with activities and tasks from the outset to facilitate student engagement and learning.

Given extant literature and the findings of this study, for HE practitioners contemplating the use of a structured approach to designing an employability skills program, or incorporating WEWO behaviours across a degree, the other major principles to consider are that of

scaffolding skill development, consistency of delivery and ensuring students understand why these behaviours are being developed. In order to improve student satisfaction with what is often denoted as 'teamwork' and increase productivity in groups, which are often newly formed, a focus on WEWO behaviours which are scaffolded across a range of units in a degree are required. It is also important that the constructive alignment of skills with activities and assessments is made explicit to students. If a unit or program relies on a large number of teaching staff, for example, these staff must be fully appraised of the need to explicitly articulate the connections between constructive alignment of the unit's activities and assessments with the specified unit and/or program learning outcomes in order for students to be able to report on their own learning outcomes. The staff also need to engage with ongoing training to enhance consistency of pedagogical practices, both within a unit and, if applicable, across a program. Students must also understand the full extent to which industry desires graduates with abilities across the whole skill-set. This is further highlighted by research into team performance in organisational settings (see Yeager and Nafukho, 2012) indicating that a global economy and ageing workforce necessitates focus on building teams of diverse individuals.

In this program, certain pedagogical practices were required for students to begin to understand that, when working with others, they will encounter differences of opinion based on culture, gender, religion, age, lifestyle factors and so on. Heterogeneity of teams had a strong impact on students' ability to work effectively with others as multicultural, and in some cases multigenerational, teams promoted cultural and diversity awareness and divergent thinking. A first step in creating heterogeneous teams is to institute team role profiling which allows for facilitator led construction of class teams based on a mix of roles, as well as allowing for consideration of gender, culture, age and other factors in each team. Allowing

time for the socialisation of the new team is also important. Icebreakers which focus on similarities, for example, ten things in common across all team members, can make inroads toward social integration of team members. Implementing cultural awareness activities, for example, business etiquette in a range of cultures can highlight differences and promote understanding (Dwyer, 2013). Training students to understand that individuals view the world through their particular cultural lens and, if not fully aware of the way in which ethnocentricity impacts communication, messages between team members can be distorted. Providing intervention training through particular activities can also help individuals understand the perspective of others (Yeager and Nafukho, 2012). Given the opportunity and freedom, students would form teams based on others most like themselves (Volet and Ang, 1998). However, the findings from this research align with the literature in that diversity in teams often leads to greater productivity and satisfaction if certain criteria are in place (De Vita, 2002).

The findings also indicate the inter-relatedness of skill development and the importance of scaffolding how all the skills are developed across a program. Communication skills, for example, were perceived as important for WEWO skill development. These are scaffolded across the program and linked inextricably and/or as appropriate to the other skills in the program. In the first two units, there is a particular focus on message packaging and professional communication skills, especially written and oral presentations. In the third unit, there is an emphasis on understanding aspects of communication that assist individuals to work more effectively with others by putting into practice relevant communication skills and strategies.

Regarding limitations, the study relies on self-report data which attracts concerns for bias (De Grez et al., 2012). Further, the sample is gathered from a single source and at a single point in time, prompting concerns for common method variance (Podsakoff et al., 2003). Despite these limitations, the study provides an insight into how the important skill of working effectively with others can be fostered in the university classroom. It facilitates the student voice through reflection (Seale, 2010) and, significantly, their opinions align with academics on the importance of constructive alignment (Biggs, 2006), scaffolded development (Hammond and Gibbons, 2005) and team composition (De Vita, 2002; Oakley et al., 2004). A better understanding of student perceptions on skill development may assist facilitators who are confronted with an increasingly diverse mix of students and growing industry expectations to produce graduates who have the ability to work effectively with others. Future research should focus more specifically on examining how best to develop and therefore assess the behaviours of influencing others, conflict resolution and social intelligence which have been previously identified by academics and industry (Institute of Directors [IOD], 2007; Jackson and Chapman, 2012a; Lang, 2009) as deficient, and now in this study are rated by students as less developed than some other behaviours. Although beyond the scope of this study, further research should also examine whether gender, age and/or cultural differences have a role to play in how the development of these skills are perceived, and whether this has implications for pedagogical practice.

References

Allen, J., and van der Velden, R. (2005), "*The role of self-assessment in measuring skills*", Research Centre for Education and the Labour Market, Maastricht, Netherlands.

Australian Association of Graduate Employers (AAGE) (2011), "*2011 AAGE Employer Survey*", AAGE, Sydney, Australia.

Australian Learning and Teaching Council (ALTC) (2010), "*Learning and teaching academic standards project – final report*", ALTC, Strawberry Hills, NSW.

Avruch, K., and Nan, S. (2013), "Introduction: The Constraints and Opportunities of Practicing Conflict Resolution from Academic Settings," *Negotiation Journal*, Vol. 29 No. 2, pp. 205-212.

Barrie, S. (2006), "Understanding what we mean by generic attributes of graduates", *Higher Education,* Vol. 51 No. 2, pp. 215–241.

Bennett, J., Pitt, M., and Price, S. (2012), "Understanding the impact of generational issues in the workplace", *Facilities*, Vol. 30 No. 7/8, pp. 278-288.

Biggs, J. (2006), *Teaching for quality learning at university: What the student does*, Society for Research into Higher Education and Open University Press, Maidenhead, UK.

Boud, D. and Associates (2010), "*Assessment 2020: Seven propositions for assessment reform in higher education*", ALTC, Strawberry Hills, NSW.

Callanan, G., and Perri, D. (2006), "Teaching Conflict Management Using a Scenario-Based Approach", *Journal of Education for Business*, Vol. 81 No. 3, pp. 131-139.

Casner-Lotto, J., and Barrington, L. (2006), "*Are they really ready to work*". The Conference Board, Inc., USA.

Confederation of British Industry (CBI) (2011), "*Building for growth: business priorities for education and skills – Education and skills survey 2011*". CBI, London.

Daniel, G., Arce, M, and Gunn, L.B. (2005), "Working well with others: The evolution of teamwork and ethics." *Public Choice*, Vol. 123 No. 1/2, pp. 115-131.

De Grez, L., Valcke, M., and Roozen, I. (2012), "How effective are self- and peer-assessment of oral presentation skills compared with teachers' assessments". *Active Learning in Higher Education*, Vol. 13 No. 2, pp. 129-142.

De la Harpe, B., and David, C. (2012), "Major influences on the teaching and assessment of graduate attributes", *Higher Education Research and Development*, Vol. 31 No. 4, pp. 493-510.

De Vita, G. (2002), "Does assessed multicultural group work really pull UK students' average down?", *Assessment and Evaluation in Higher Education,* Vol. 27 No. 2, pp. 153-161.

Dwyer, J. (2013), *Communication for Business and the Professions.* Frenchs Forest, Pearson Australia Ltd.

Fisher, E. (2011), "What practitioners consider to be the skills and behaviours of an effective people project manager." *International Journal of Project Management*, Vol. 29 No. 8, pp. 994-1002.

Glaser, B., and Strauss, A. (1973), *The Discovery of Grounded Theory: Strategies for Qualitative Research*, Aldine Publishing Company, Chicago.

Graduate Careers Australia (GCA) (2011), "*Graduate Outlook 2011: the report of the Graduate Outlook Survey*", GCA, Parkville, Australia.

Hammond, J., and Gibbons, P. (2005), "What is scaffolding?", in Burns, A. & de Silva Joyce, H. (Eds.), *Teaching Voices 8*, National Centre for English Language Teaching and Research, Sydney, pp. 8-16.

Hampson, I., and Junor, A. (2010), "Putting the process back in: rethinking service sector skill", *Work, Employment & Society*, Vol. *24* No. 3, pp. 526-545.

Hart Research Associates (2010), *"Raising the bar: Employers' views on college learning in the wake of the economic downturn",* Association of American Colleges and Universities, USA.

Harvey, M., Bauserman, A. and Bollinger, B. (2012), "Pilot test of an employability skills rubric: A component of the summary of performance report", *Career Development and Transition for Exceptional Individuals*, Vol. 35 No. 2, pp. 118-128.

Houldsworth, C., and Mathews, B. (2000), "Group composition, performance and attainment", *Education + Training,* Vol. 42 No. 1, pp. 40-53.

Hovland, K., and Schneider, C. (2011), "Deepening the connections: Liberal education and global learning in college", *About Campus*, Vol. 16 No. 5, pp. 2–8.

Hughes, R., and Jones, S. (2011), "Developing and assessing college student teamwork skills", *New Directions for Institutional Research*, Vol. 149, pp. 53-64.

Institute of Directors (IOD) (2007), *"Institute of Directors Skills Briefing – December 2007: Graduates' Employability Skills"*, IOD, London, UK.

Jackson, D. (2010), "An international profile of industry relevant competencies and skill gaps in modern graduates", *International Journal of Management Education,* Vol. 8 No. 3, pp. 29-58.

Jackson, D. (2012), "Business undergraduate perceptions of their capabilities in employability skills and implications for industry and higher education", *Industry and Higher Education,* Vol. 26 No. 5, pp. 345-356.

Jackson, D., and Chapman, E. (2012a), "Non-technical skill gaps in business graduates", *Education + Training*, Vol. 54 No. 2/3, pp. 95-113.

Jackson, D., and Chapman, E. (2012b), "Non-technical competencies in undergraduate Business degree programs: Australian and UK perspectives", *Studies in Higher Education*, Vol. 37 No. 5, pp. 541-567.

Jassawalla, A., Sashittal, H. and Sashittal, A. (2009), "Students' perceptions of social loafing: Its antecedents and consequences in undergraduate business classroom teams", *Academy of Management Learning & Education*, Vol. 8 No. 1, pp. 42-54.

Jung, J. (2011), "Assessing learning from a community engagement project", *Education + Training*, Vol. 53 No. 2/3, pp. 155-165.

Lang, M. (2009), "Conflict management: A gap in business education curricula", *Journal of Education for Business,* Vol. 84 No. 4, pp. 240-245.

Lawson, R., Fallshaw, E. Papadopoulos, T., Taylor, T. and Zanko, M. (2011), "Professional learning in the business curriculum: Engaging industry, academics and students", *Asian Social Science*, Vol. 7 No. 4, pp. 61-68.

Lowden, K., Hall, S., Elliot, D. and Lewin, J. (2011), *"Employers' perceptions of the employability skills of new graduates",* University of Glasgow SCRE Centre and Edge Foundation, London, UK.

McLoughlin, C. (2001), "Inclusivity and alignment: Principles of pedagogy, task and assessment design for effective cross cultural online learning", *Distance Education,* Vol. 22 No. 1, pp. 7-29.

Oakley, B., Felder, R., Brent, R. and Elhajj, I. (2004), "Turning Student Groups into Effective Teams", *Journal of Student Centred Learning,* Vol. 2 No. 1, pp. 9-34.

Oliver, B., and Whelan, B. (2011), "Designing an e-Portfolio for Assurance of Learning Focusing on Adoptability and Learning Analytics", *Australasian Journal of Educational Technology*, Vol. 27 No. 6, pp. 1026-1041.

Peterson, C. (2012), "Building the Emotional Intelligence and Effective Functioning of Student Work Groups: Evaluation of an Instructional Program", *College Teaching*, Vol. 60 No. 3, pp. 112-121.

Podsakoff, P, Mackenzie, S., Lee, J. and Podsakoff, N. (2003), "Common method biases in behavioral research: a critical review of the literature and recommended remedies. *Journal of Applied Psychology*, Vol. 88 No. 5, pp. 879–903.

Rabasso, C., and Rabasso, J. (2010), "A Chomskyan Approach to Responsible Critical Management Education", *Journal of Global Responsibility*, Vol. 1 No. 1, pp. 66-84.

Ramsden, P. (1992), *Learning to Teach in Higher Education*. Routledge, London.

Richter, D., and Paretti, C. (2009), "Identifying barriers to and outcomes of interdisciplinarity in the engineering classroom", *European Journal of Engineering Education*, Vol. 34 No. 1, pp. 29-45.

Riebe, L., Roepen, D., Santarelli, B. and Marchioro, G. (2010), "Teamwork: effectively teaching an employability skill", *Education+ Training*, Vol. 52 No. 6/7, pp. 528-539.

Rosen, C. (2012), "*A problem-based approach to teaching employability and independent learning skills*". Higher Education Academy, UK.

Rousseau, V., Aubé, C., and Savoie, A. (2006), "Teamwork Behaviors A Review and an Integration of Frameworks", *Small Group Research*, Vol. 37 No. 5, pp. 540-570.

Schultz, J., Wilson, J., and Hess, K. (2010), "Team-based classroom pedagogy reframed: the student perspective", *American Journal of Business Education*, Vol. 3 No. 7.

Schwartz, S. (2010), "Job Skills Par for the Course", *Higher Education Supplement, The Australian*. 15th September, p. 29.

Seale, J. (2010), "Doing student voice work in higher education: an exploration of the value of participatory methods" *British Educational Research Journal,* Vol. 36 No. 6, pp. 995-1015.

Shimazoe, J., and Aldrich, H. (2010), "Group work can be gratifying: Understanding & overcoming resistance to cooperative learning", *College Teaching*, Vol. 58 No. 2, pp. 52-57.

Sondergaard, L., and Murthi, M. (2012), "*Skills, not just Diplomas – Managing education for results in Eastern Europe and Central Asia*", World Bank, Washington, USA.

Stivers, B., Adams, J. and Liu, B. (2007), "Managerial success factors: A Chinese profile", *Journal of Teaching in International Business*, Vol. 18 No. 4, pp. 57–80.

Volet, S., and Ang, G. (1998), "Culturally mixed groups on international campuses: An opportunity for intercultural learning", *Higher Education Research and Development,* Vol. 17 No. 1, pp. 5-23.

Yeager, K., and Nafukho, F. (2012) "Developing diverse teams to improve performance in organizational settings. *European Journal of Training and Development, 36*(4), 388-408.

Zhu, X., Iles, P. Shutt, J. (2011), "Employability, skills and talent management in Zhejiang Province" *Journal of Chinese Entrepreneurship*, Vol. 3 No. 1, pp. 24-35.

Table 1 Employability skill framework (adapted from Jackson and Chapman 2012b)

Skill set	Behaviours
Working effectively with others *Core to Units One, Two and Three*	Task collaboration; team working; social intelligence; cultural and diversity awareness; influencing others and conflict resolution
Communicating effectively *Core to Unit One*	Verbal communication; giving and receiving feedback; public speaking; meeting participation; written communication
Self-awareness *Core to Units One and Four*	Meta-cognition; lifelong learning; career management
Thinking critically *Core to Unit Two*	Conceptualisation; evaluation
Analysing data and using technology *Core to Unit Two*	Numeracy; technology; information management
Problem Solving *Core to Unit Three*	Reasoning; analysing and diagnosing; decision making
Developing initiative and enterprise *Core to Unit Two and Three*	Entrepreneurship/ Intrapreneurship; lateral thinking/creativity; initiative; change management
Self-management *Core to Unit Three*	Self-efficacy; stress tolerance; work/life balance; self-regulation
Social responsibility and accountability *Core to Units Three and Four*	Social responsibility; accountability; personal ethics; organisational awareness
Developing professionalism *Core to Unit Four*	Efficiency; multi-tasking; autonomy; time management; drive; goal and task management

Table 2 Working effectively with others (WEWO) skill set (adapted from Jackson and Chapman 2012b)

Behaviour	Descriptor
Task collaboration	Complete group tasks through collaborative communication, problem solving, discussion and planning.
Team working	Operate within, and contribute to, a respectful, supportive and cooperative group climate.
Social intelligence	Acknowledge the complex emotions and viewpoints of others and respond sensitively and appropriately.
Cultural and diversity awareness	Work productively with people from diverse cultures, races, ages, gender, religions and lifestyles.
Influencing others	Defend and assert their rights, interests and needs and convince others of the validity of one's point of view.
Conflict resolution	Address and resolve contentious issues with key stakeholders.

Table 3 Breakdown of students by demographic/background characteristics

Characteristic	Sub-group	Overall	
		n	%
Unit	One	339	42.4
	Two	170	21.3
	Three	193	24.1
	Four	97	12.2
Sex	Male	351	43.9
	Female	448	56.1
Age	16-20 years	319	39.9
	21-25 years	313	39.2
	26-30 years	84	10.5
	31-40 years	58	7.3
	41+ years	25	3.1
Degree type	Bachelor of Business	694	86.9
	Other	105	13.1
Student status	International	261	32.7
	Domestic	538	67.3
Continent of birth	Asia	270	33.8
	Africa	67	8.4
	Europe	85	10.6
	Americas	12	1.5
	Australasia	365	45.7
First language	English	455	56.9
	Other	344	43.1
Paid employment (hours per week)	0 hours	159	20
	1 to 9 hours	88	11
	10 to 19 hours	209	26
	20 to 29 hours	211	27
	30 to 37 hours	34	4
	38 hours+	98	12

Table 4 Student perceptions of core skills development across employability skills program

Skill set	Units	Mean	Standard deviation
Working effectively with others	Unit One	7.12	1.37
	Unit Two	7.36	1.37
	Unit Three	7.46	1.27
Communicating effectively	Unit One	7.28	1.41
Self-awareness	Unit One	7.09	1.57
	Unit Four	7.92	1.53
Thinking critically	Unit Two	7.32	1.51
Analysing data and using technology	Unit Two	7.63	1.47
Problem solving	Unit Three	7.23	1.59
Developing initiative and enterprise	Unit Two	7.42	1.32
	Unit Three	7.22	1.59
Self-management	Unit Three	7.24	1.54
Social responsibility and accountability	Unit Three	7.25	1.59
	Unit Four	7.76	1.71
Developing professionalism	Unit Four	7.59	1.64

Table 5 Development of WEWO across the employability skills program

Behaviour	Unit One		Unit Two		Unit Three	
	Mean	*SD*	*Mean*	*SD*	*Mean*	*SD*
Task collaboration	7.62	1.566	7.89	1.499	7.88	1.529
Team working	7.52	1.552	7.52	1.551	7.48	1.403
Social intelligence	7.09	1.738	7.09	1.674	7.35	1.527
Cultural and diversity awareness	7.27	1.881	7.74	1.743	7.44	1.743
Influencing others	6.86	1.786	7.05	1.716	7.27	1.551
Conflict resolution	6.34	1.984	6.89	1.918	7.22	1.831
Average for skill set	7.12	1.37	7.36	1.37	7.46	1.27