Personality traits in Australian business graduates and implications for organisational effectiveness.

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PERSONALITY TRAITS IN AUSTRALIAN BUSINESS GRADUATES AND IMPLICATIONS FOR ORGANISATIONAL EFFECTIVENESS

ABSTRACT
The Five-Factor model is widely accepted to form a robust model of personality which influences workplace behaviour and performance. Given evidence of persistent skill gaps, exploring personality traits in Business graduates is important to understand whether they have the necessary characteristics for Australia to perform nationally and compete on a global level, particularly during prevailing periods of economic uncertainty. This study examines personality traits in 674 Australian business graduates, using the Ten-Item Personality Inventory (TIPI), and variations in traits across demographic/background characteristics. Results indicate graduates are relatively high in Extraversion, Conscientiousness and Emotional Stability and low in Openness and Agreeableness. Some gender differences were apparent. Findings are largely positive for organisational performance yet raise concern for organisational well-being, effective leadership and innovativeness. There is some alignment between findings and documented deficiencies in graduate performance, highlighting areas for intervention. Strategies for managing typical traits in Business graduates, and their potential impact on prevalent skill gaps, are discussed for both professional and education practitioners.

KEY WORDS
Employability, business graduate, personality, recruitment
INTRODUCTION

The importance of high performing graduates for enhancing organisational productivity, national innovation and global competitiveness is widely acknowledged (Glover et al, 2002). Highly functioning and effective graduates are important not least for individual prosperity, particularly given the rising trends in graduate unemployment and underemployment (Accenture, 2013; Graduate Careers Australia [GCA], 2012), but also to advance the nation’s knowledge economy, growth and productivity, identified as one of Australia’s key strategic research priorities (Department of Industry, Innovation, Climate Change, Science, Research & Tertiary Education [DIICCSRTE], 2013). The strategic focus on up-skilling the graduate workforce to meet national economic needs extends to other developed countries, such as the UK and US (see Bowman, 2010). Developed economies are experiencing increasingly competitive graduate labour market conditions (Ratcliffe, 2013; Ross, 2012) with new graduates having to demonstrate a wealth of desired attributes, particularly in the non-technical domain, to succeed in attaining employment (Confederation of British Industry [CBI], 2011; GCA, 2012).

The drive to up-skill graduates has provided impetus for a wealth of initiatives, in particular the embedding of non-technical skills and rise in work-integrated learning (WIL) opportunities, in higher education. Despite the implementation of a range of policies and practices relating to the skills agenda, significant evidence suggests graduates are still inadequately equipped in certain non-technical skills and attributes, in particular critical thinking, leadership, communication and team-work, and fail to fulfil the needs and expectations of the contemporary workplace (see Jackson, 2012). This has promoted ongoing evaluation of the alignment between industry requirements and higher education provision (see, for example, Holtzman and Craft, 2011; Tempone et al, 2012) and the exploration of new and innovative pedagogical practices in the development of desired non-technical skills and attributes in undergraduates (see Gersten, 2012).
There is evidence that an individual’s personality will influence their work performance in a number of different ways. There are documented links between personality type and innovativeness (Steel et al, 2012); life satisfaction (Lounsbury et al, 2009); career progression and job outcomes (Mount and Barrick, 1998); job satisfaction (Judge, Heller et al, 2002; Walsh and Eggerth, 2005); training proficiency (Barrick and Mount, 1991); leadership effectiveness (Judge, Heller et al, 2002); management readiness (Encalarde and Fok, 2012); professional burnout and job engagement (Kim et al, 2009) and participation in self-managed work groups (Thoms et al, 1996). Holland (1997) argues that employees will be most satisfied and perform better where there is a good fit between their personality and work environment, enhancing organisational effectiveness and harmony. Further, an undergraduate’s personality may influence their academic performance (Komarraju et al, 2009) and ability to attain employment (Sutin et al, 2009).

Given evidence of continued industry dissatisfaction with the work performance of new graduates and prevalent skill gaps in certain non-technical skills (see Jackson and Chapman, 2012), and the challenges faced by intense global competition from growing powerhouses such as China and India (Department of Innovation, University and Skills [DIUS], 2008), the exploration of graduate personality traits is important. Understanding these traits may inform us whether they have the necessary characteristics for Australia to perform nationally and compete on a global level, particularly during prevailing periods of economic uncertainty. Further, it may identify certain policies and practices in job design, recruitment and selection, professional development and performance management which will enhance individual work performance and, therefore, organisational productivity. Similarly, findings may inform curricula design and pedagogical practices which better nurtures the desired traits and characteristics required for graduates to succeed in the workplace.
This study explores the personality traits of Business graduates using the Five-Factor Model (FFM) of personality (Costa and McCrae, 1992a). The FFM is a widely accepted taxonomy of personality traits (Digman, 1990) which identifies five dimensions representing the underlying theoretical structure of personality (Digman and Takemoto-Chuck, 1981). These are (i) Extraversion; (ii) Agreeableness; (iii) Conscientiousness; (iv) Emotional Stability; and (v) Openness (see Goldberg, 1990). Despite concerns on whether a model can realistically capture all personality traits and the rigour of factor analysis upon which it was derived (Costa and McCrae, 1992b), there has been significant effort to confirm its generality and robustness (see Goldberg, 1990) and the conceptual value of the five traits is largely acknowledged. Consequently, a number of self-rating scales have been developed to measure the five personality traits (see Costa and McCrae, 1992a).

Business graduates have been selected for two reasons. First, they are considered the new frontier of management and global leadership with significant responsibility for productivity, growth and competitiveness. Second, they continue to attract critique among industry stakeholders with their current capabilities and personal attributes (Atfield and Purcell, 2010; Lowden et al, 2011). The research objectives are to: i) identify the defining personality traits of business graduates currently employed in Australia; (ii) evaluate whether these traits vary by demographic/background characteristics; (iii) outline the implications of the traits and documented variations for individual workplace and organisational performance; and (iv) identify strategies for higher education and professional practitioners to enhance work performance and alleviate skill gaps in light of the findings. These objectives will be addressed using data collected from 674 business graduates, from across all 39 Australian universities, who are working on a full-time basis in a range of work areas within the public, private and not-for-profit sector. The paper is structured to first outline adopted methodology, followed by
results and, finally, a discussion of implications for workplace productivity and performance, in light of extant literature.

BACKGROUND

Personality traits defined

It is important to note there are proposed personality models and some resistance to the fundamental notion of trait analysis (see Mischel, 2013). There is, however, significant agreement in extant literature on personality’s number of dimensions yet interpretation of their meaning is not entirely homogenous (Barrick and Mount, 1991). Extraversion refers to a “preference for companionship and social stimulation” and is characterised by social skills, popularity, participation in sports and clubs (McCrae and Costa, 1999, p. 164) with describing adjectives of “active, assertive, energetic, enthusiastic, outgoing and talkative” (McCrae and John, 1992, p. 178). Comprising ambition and sociability (Hogan, 1986), extraverts are expected to seek status and social interaction from their work; leading to leadership and higher standing (see George et al, 2011). George et al argue strong engagement and an ability to demonstrate initiative and entrepreneurship are important in extravert’s work roles. High levels of Extraversion are typical to business occupations (Lounsbury et al, 2009) and a prerequisite to business success (De Janasz et al, 2002). Abidin and Daud’s (2012), however, argue it is still lacking in business graduates, relative to industry requirements.

Agreeableness concerns individual orientations to interpersonal relationships (Graziano and Tobin, 2009), described by Poropat (2009) as “likability and friendliness” (p. 322), and is characterised by “forgiving attitudes, belief in cooperation, inoffensive language, reputation as a pushover” (McCrae and Costa, 1999, p. 164). Describing adjectives are “appreciative, forgiving, generous, sympathetic, kind, warm, trusting” (McCrae and John, 1992, p. 178). Salient to jobs requiring cooperation and customer service, individuals with high Agreeableness seek
supportive environments (Barrick et al, 2002) and are typically courteous, flexible and good-natured (see Alibin and Daud, 2012), as well as compliant, trustworthy and stable (Clarke and Robertson, 2005). Betz and Borgen (2010) argue motivation and goal direction are accurate representations of Conscientiousness, described by Poropat (2009) as “dependability and will to achieve” (322), and characterised by “leadership skills, long-term plans, organised support network, technical expertise” (McCrae and Costa, 1999, p. 164). Describing adjectives are “efficient, organised, planful, reliable, responsible, thorough” (McCrae and John, 1992, p. 178). Workers with high levels of Conscientiousness are considered dutiful, cautious and likely to make prudent job choices (George et al, 2011).

Emotional Stability concerns tendencies for hopelessness, guilt and sadness and low levels are typified by “low self-esteem, irrational perfectionistic beliefs, pessimistic attitudes” (McCrae and Costa, 1999, p. 164). It is the inverse of neuroticism which is associated with insecurity, anger, anxiety and depression, causing worry and nervousness which may inhibit job performance (Barrick and Mount, 1991). Low levels may cause hostility, competitiveness and ruthlessness with a tendency for conflict (see Bono et al, 2009). Barrick and Mount (1991) suggest poor Emotional Stability may sometimes be a symptom of a particular job role, rather than an inherent individual trait. Finally, Openness refers to being cultured; favouring variety, novelty and change; and curiosity and intelligence (Barrick and Mount, 1991) and can be demonstrated by diverse interests, hobbies and a tendency for travel (McCrae and Costa, 1999). Describing adjectives are “artistic, curious, imaginative, insightful, original” (McCrae and John, 1992, p. 178). George et al (2011) argue individuals with high levels of Openness will seek intellectual or self-expressive work, pursue lifelong learning and will enjoy creativity and autonomy. Emotional Stability concerns the ability to effectively regulate one’s emotions (see Joseph and Newman, 2010), aligning considerably with emotional intelligence (Lievens et al, 2011).
Personality and graduate selection

Acknowledging the influential role of personality traits, 45% of Australian graduate employers use personality questionnaires as a selection technique (Australian Association of Graduate Employers [AAGE], 2011). Cole et al (2009) discuss the common practice of recruiter’s conjecturing personality traits from job applicant’s resumes and using these to evaluate and compare applicant employability; ultimately influencing selection outcomes. They found recruiter judgement on personality traits was typically inaccurate and unreliable with accurate inferences only for Extraversion, more transparent through the number of extra-curricular activities and confirming broad acknowledgement of its high visibility in the recruitment context. Despite expectations that Consciousness and Openness would be transparent in resumes via strong academic achievement and an interest in diverse activities such as travel and community activities, findings suggested otherwise. Interestingly, their study indicated that business graduates perceived to have higher levels of Conscientiousness, Extraversion and Openness received more positive employability assessments in the initial stages of screening.

Further, Moy and Lam (2004) found that Conscientiousness was considered the most important personality trait, and more important than skills, in graduate selection. As employers may recruit on individual personality traits, inferential inaccuracies are a concern and augment a better understanding of graduate personality profiles.

A better appreciation of typical personality traits may improve our understanding of graduate work-readiness and prevailing skill gaps in the Australian economy. Industry needs and expects strong graduate skills in team working, communication, initiative and enterprise, self-management and professionalism although there are documented skill gaps in many of these areas (see Jackson and Chapman, 2012). Examining graduate personality traits may provide human resource practitioners and educators a better understanding of the cause of certain gaps in workplace performance and assist in identifying strategies for improvement. Further,
documented variations in personality traits by gender (Schmitt et al, 2008), age (Soto et al, 2011), business discipline (Noel et al, 2003) and occupational type (Barrick et al, 2003) are largely unexplored in the graduate cohort and may impact effective human resource practices.

METHOD

Participants

Table 1 summarises the demographic/background characteristics of the 674 business graduates participants. All were working in a full-time role within Australia and completed a business-related undergraduate degree. Eighty eight percent completed a Business/Commerce generalist degree and 12% a specific discipline such as Management, Marketing, Finance and Accounting.

[Insert Table 1]

Procedures

Data was gathered on the personality traits of business graduates through self-assessment in an online survey. Graduates from a range of different industries were invited to participate between April and June 2012. Invitations were extended via Human Resource personnel based in organisations employing business graduates, identified through the AAGE and Graduate Careers Australia (GCA) websites. In addition, certain university alumni offices circulated details on the survey via electronic mail and/or social networking and career web pages. Finally, relevant professional associations publicised the survey to members via electronic mail and/or newsletters.

Instrument

The survey initially gathered data on the background demographic/employer characteristics summarised in Table 1. Participants were then asked to complete Gosling et al’s (2003) Ten-Item Personality Inventory (TIPI). The inventory is a respected instrument for a brief
assessments of the Big-Five personality domains and demonstrates adequate measures of validity and reliability (Romero et al, 2012). It is based on individual self-ratings, on a Likert-type response format ranging from one to seven, of what extent they agree pairs of ten traits apply to them. A rating of one equates to ‘disagree strongly’ and seven to ‘agree strongly’. Each of the five traits is represented by two items, one indicating the positive anchor for a trait, the other a negative anchor. The negative item is reverse coded and an average of the two items gives a score for each trait. Cronbach alpha values for the five traits ranged from .405 to .716. These low values are comparable with other studies using the TIPI, attributed to using only two items per dimension (Ehrhart et al, 2009). The ten items are presented in Table 2.

[Insert Table 2]

RESULTS

Personality traits

Generated data on the five traits was screened for normality using stem and leaf plots. Skewness and kurtosis fell well within the ‘normal’ thresholds of 5 and 10 respectively (see Curran et al, 1996). Table 3 presents the mean ratings and standard deviation for each trait for both the graduate sample and normative data provided by Gosling et al (2003). The table shows the sample means were marginally above the norm for Extraversion; above the norm for Conscientiousness and Emotional Stability; marginally below the norm for Openness and below the norm for Agreeableness. Findings broadly aligned with previous studies on personality traits in business graduates, compared with non-Business majors, with prior evidence of relatively low levels of Openness and Agreeableness and high levels of Emotional Stability, Extraversion and Conscientiousness (Lounsbury et al, 2009). High ratings for Conscientiousness were to be expected given prevalent soft graduate labour markets which urge discipline, dedication, self-management and compliance to achieve and retain highly sought after job positions (Lounsbury et al, 2009). [Insert Table 3]
Variations in personality traits

A series of MANOVAs (α=.05) was conducted to detect any variations in personality traits by age, gender, organisation type, degree type and work area. Significant interactions were recorded for gender, $\lambda = .909$, $F(5, 668) = 13.348$, $p = .000$, partial $\eta^2 = .091$; age, $\lambda = .947$, $F(20, 2206.505) = 1.814$, $p = .015$, partial $\eta^2 = .013$; and work area, $\lambda = .926$, $F(30, 2654) = 1.705$, $p = .010$, partial $\eta^2 = .015$. Significant results for univariate ANOVAs, at Bonferroni-adjusted $\alpha$ levels of .01, are summarised in Table 4. Interactions for age, for Emotional Stability ($p=.044$) and Openness ($p=.043$), were discarded due to the more stringent alpha value. Tukey post-hoc results indicated the significant effect for Emotional Stability by work area was due to Administration/Legal being higher than Finance ($p=.014$). For Openness, those in Administration/Legal are significantly higher than graduates based in Finance ($p=.020$) and Policy/Research/Regulation ($p=.005$). These results somewhat align with conventional thinking on the requirements of Administrative/Legal professionals who interact regularly with others yet are required to cope with significant pressure. The homogeneity in ratings across different work areas is interesting and prompts further investigation. Categorising the sample into explicit occupational types and examining the relationship between graduate vocational interests (Holland, 1997) and personality traits.

[Insert Table 4]

Table 5 presents $t$-test results for males and females for Conscientiousness, Emotional Stability and Agreeableness for the sample data. Means for the normative data are also provided for comparative purposes. Results indicated that females had significantly higher ratings for Conscientiousness ($p=.000$), aligning with previous research (Schmitt et al, 2008), although both males and females were considerably higher than their respective normative means. This may be attributed to females needing to demonstrate more drive, dedication and discipline to survive in the traditionally male-dominated world of business. For Emotional Stability, females were
significantly lower than their male counterparts \( (p=0.000) \), aligning with literature on gender differences in personality traits (Costa et al, 2001; Schmitt et al, 2008) although, again, mean ratings for both groups were considerably higher than the norm for this trait. Finally, females scored significantly higher for Agreeableness \( (p=0.000) \), aligning with literature (Costa et al, 2001), although both sample averages were notably lower than the normative means. The higher mean rating, although not significantly so, for females in Openness and Extraversion aligned with other studies (Costa et al, 2011; Schmitt et al, 2008).

[Insert Table 5]

Although no variations by degree type were noted, exploration of variations by major was not undertaken due to difficulties in analysing multiple majors. Noel et al’s (2003) assertion that variations exist by business discipline, following conventional stereotypes for each area, was therefore not adequately assessed. The lack of variation by age is unsurprising, given the age distribution within the sample. Although Soto et al (2011) detected distinct, positive trends in Agreeableness, Emotional Stability and certain facets of Conscientiousness during adulthood, their sample ranged from 10 to 65 \( (n=1,267,218) \) with a minimum of 945 participants at each year of age. Variations by organisation type were not detected.

**IMPLICATIONS FOR WORK PERFORMANCE**

The implications of typical Business graduate traits and their variations by demographic/background characteristics are discussed for individual workplace and organisational performance.

**Job performance**

Relatively high levels of Extraversion in business graduates predict efficiency (Abidin and Daud, 2012) and strong job performance, particularly for those jobs involving social interaction
such as management and sales (Barrick and Mount, 1991). The relatively high Emotional Stability is critical for managing the stress and pressure associated with the corporate world (Lounsbury et al, 2009), this ability deemed highly important by graduate employers (Casner-Lotto and Barrington, 2006; FSSC, 2007). Low levels of ‘emotionality’ also predict lower levels of job burnout (see Kim et al, 2009), defined as “emotional exhaustion, depersonalization, and diminished personal accomplishment” (p. 97) and supported further by the negative relationship between Extraversion and burnout (Madnawat and Mehta, 2012). Findings therefore suggest business graduates are less prone to professional burnout which adversely affects individuals and organisations each year and could be aggravated further by economic uncertainty and soft labour markets.

Elevated Conscientiousness is consistently associated with strong job performance as it typifies self-discipline and dutifulness (Abidin and Daud, 2012); compliance with policy and procedures (Arthur and Doverspike, 2001); systematic decision-making (Clarke and Robertson, 2005) and goal targeting and reporting and contingency planning (see Abidin and Daud, 2012; Bipp and Kleingeld, 2011). The relatively high mean for Conscientiousness indicates persistence, a propensity to work hard and elevated levels of responsibility within the sample. In combination with Emotional Stability, Conscientiousness predicts positive job engagement, where workers are physically involved with tasks and emotionally connected to others in the workplace (Kim et al, 2009). Further, in Barrick et al’s (2003) full motivational model, only Conscientiousness and Emotional Stability have a theoretically stable relationship with job performance with Openness and Agreeableness displaying only weak positive relationships in certain occupations (Barrick and Mount, 1991). Strong professionalism, self-regulation and work ethic are evidenced in business graduates (see Jackson and Chapman, 2012), aligning with the high levels of Conscientiousness.
**Satisfaction and organisational well-being**

Emotional Stability and Conscientiousness are positively related to job satisfaction in business-related occupations (Lounsbury et al, 2009) and Extraversion is a determinant across most occupations (Judge, Heller et al, 2002). Extraverts must avoid monotony (Thiffault and Bergeron, 2003) and expect job satisfaction as work is a social outlet and a means of achieving gratification (Hurley, 1998). Strong Emotional Stability also leads to high levels of job satisfaction (Judge and Bono, 2001), creating a positive outlook for business graduates. DeNeve and Cooper (1998) found all traits were related to subject well-being and suggest that engaging in goal-directed activity and personal control will enhance life satisfaction. Conversely, Lounsbury et al (2009) believe all but Agreeableness are related to life satisfaction, offering a more promising outlook for business graduates. Maintaining low levels of labour turnover is, according to Moscoso and Iglesias (2009), related to all traits but Openness which, again, is reasonably positive.

Organisation citizenship, considered essential for business success and organisational effectiveness, is influenced by Extraversion, Emotional Stability and Openness (Chiaburu et al, 2011). Agreeableness, through demonstrating courtesy, cooperation and altruism, and Conscientiousness, through diligence and achievement-orientation (see Ilies et al, 2004), are also important. Further, social responsibility - increasingly important in an era of accountability and ethical practice - depicts a community spirit, citizenship and social innovativeness and is augmented by high levels of Openness, Conscientiousness, Emotional Stability and Agreeableness (Nga and Shamuganathan, 2010). This creates a mixed picture for business graduates, particularly for females with very low levels of Agreeableness. Despite these concerns raised by lower levels of Openness and Agreeableness, evidence suggests business graduates are highly ethical and understand the importance of personal and social accountability (see Jackson and Chapman, 2012).
Team working and communication

Lounsbury et al (2009) argue higher levels of Extraversion augment “public speaking, interactional, and social facilitation skills; a broader network of business contacts and relationships; and greater membership and participation in clubs, groups, and organizations” (p. 203). Extraverts crave social interaction, enjoy team working and manage social relationships well (O’Neill and Kline, 2008). High levels are typically considered important for team working (McCrae and Costa, 2008), due to enhanced communication skills and the ability to build rapport with other members (see Thoms et al, 1996); although O’Neill and Kline (2008) argue this relationship is less than clear. Extraverts are considered argumentative and embrace confrontation yet they typically do not experience more conflict (see Bono et al, 2009). High levels of Emotional Stability predict strong task performance within teams (O’Neill and Kline, 2008) and are vital for team working (Moscoso and Iglesias, 2009) and team leadership (Hogan et al, 1994) due to elevated self-confidence (Larson and LaFasto, 1989) and low stress levels (Wellins et al, 1991). This aligns with recent literature on business graduates with evidence of high self-efficacy and a propensity for effective stress management (Jackson and Chapman, 2012).

Caution, self-discipline and hard work (Costa and McCrae, 2008) will mean a trustworthy and organised team member (Thoms et al, 1996) and strong team performance (Barrick and Mount, 1991), although there is some evidence which contradicts this positive relationship between Conscientiousness and team outcomes (see O’Neill and Kline, 2008). The emotionally-oriented aspects of Conscientiousness are acknowledged with strong interpersonal functioning due to an elevated propensity for guilt and shame and the ability to read emotional cues in others which guides socially appropriate behaviour (see Joseph and Newman, 2010). Openness will enable workers to embrace change and be creative, important for team working (see Thoms et al, 1996) although relatively low levels may be beneficial as the trait is associated with confrontational
conflict management approaches and negatively associated with avoidance and compromising strategies. Bono et al (2009) found individuals with high levels of Openness experience more conflict, attributing this to both relationship and task concerns. In Thoms et al’s study of the relationship between traits and self-efficacy in participating in a self-managed team, Extraversion, Emotional Stability and Conscientiousness were positively related. This implies the sample have strong beliefs that they can successfully perform in a small group environment, implying significant effort and outcomes in their team working environment.

Of concern, however, is Agreeableness being a fundamental trait for effective team working (Moscoso and Iglesias, 2009), through the favouring of cooperation, affiliation and compassion (see Cogliser et al, 2012), team cohesion (see O’Neill and Kline, 2008) and an antecedent for building trust and team morale (Thoms et al, 1996). Higher levels imply a greater propensity for conflict resolution (see O’Neill and Kline, 2008) and less frequent conflict (Bono et al, 2009). Managers should be mindful of female’s very low levels in this trait when considering team selection and composition. Interestingly, graduate inability to effectively manage conflict is evidenced by employers (Jackson and Chapman, 2012). These concerns are counterbalanced by O’Neill and Kline (2008) who argue individual predisposition to working in teams, in terms of attraction and enjoyment, is a significant predictor of team outcomes and personality testing should be used with caution as relationships between certain traits and team performance and cohesion is less than clear. Overall, findings suggest business graduates typically possess the personality traits to support a positive team experience and align with evidence that graduates are able to work effectively with others (AAGE, 2011; GCA, 2011).

Deficiencies in business graduate oral communication skills (Gray and Murray, 2011), considered critical for graduate employability (AAGE, 2011), may be explained by low levels of Openness where individuals lack confidence in communicating with others (Blume et al, 2012).
This may be aggravated by low Agreeableness where sensitivity and thoughtfulness is lacking for effective communication. Evidence of a positive relationship between assertiveness, encompassed in Extraversion, and oral communication (Ockey, 2011) may, however, enhance graduate proficiency in this area.

**Leadership**

Extraversion is widely considered a predictor of leadership (Judge, Bono et al, 2002) and management readiness (Encalarde and Fok, 2012). It is consistently positively related to transformational leadership (Balthazard et al, 2009); role model status and leader emergence (Ilies et al, 2004; Moscoso and Iglesias, 2009); the occupation of leadership positions and completion of leader tasks and duties (see Cogliser et al, 2012). Emotional Stability is also important for effective management and leadership (Encalarde and Fok, 2012; U.S. Small Business Administration, 2006) and the need for high levels with economic uncertainty and intense global competition (Lounsbury et al, 2009). There is some evidence to suggest more emotionally stable individuals will emerge as leaders (Moscoso and Iglesias, 2009), particularly important in virtual working environments where communication must be interpreted with logic not emotion (see Cogliser et al, 2012), although Reichard et al (2011) detected no such relationship. In fact, Balthazard et al (2009) found an inverse relationship with transformational leadership, prompting further research in this area (Cogliser et al, 2012).

Conscientiousness is also a strong predictor of leader emergence (Judge, Bono et al, 2002; Moscoso and Iglesias, 2009) although not related to the visionary behaviours demonstrated by transformational leadership (Bono and Judge, 2004). The high level of task orientation and perseverance demonstrated by the sample are important for leader emergence (Cogliser et al, 2012) and management readiness (Encalarde and Fok, 2012). Low ratings in Openness raise concern as it is associated with entrepreneurship (Holland, 1997), change-orientation and
dynamism and low levels connected with conventionalism and authoritarianism (see Chiaburu et al, 2011). Further, Openness is considered important for lifelong learning, knowledge sharing and pro-activity (see Chiaburu et al, 2011) and there is some evidence to suggest a positive relationship with both transformational leadership and leader emergence (Judge, Bono et al, 2002; Moscoso and Iglesias, 2009), although Reichard et al (2011) suggest otherwise.

The implications of low Agreeableness in both males and females are mixed as, although important for team working and harmony, high levels may “inhibit one’s willingness to drive hard bargains, look out for one’s own self-interest, and influence or manipulate others for one’s own advantage (Zhao and Seibert, 2006, p. 263). This ability to disconnect from others is important for managers and high levels of Agreeableness may be problematic as “it interferes with the manager’s ability to make difficult decisions affecting subordinates and coworkers” (Zhao and Seibert, 2006, p. 263). Agreeableness is only weakly associated with emergent leadership, aside from the social-oriented aspects within virtual teams, yet low levels raise concern for transformational leadership with which it is positively associated (see Cogliser et al, 2012). Cogliser et al attribute this to the trait augmenting role model status due to demonstrating concern for others and trustworthiness.

**Career progression**

Mayrhofer et al (2005) found “the more business school graduates prefer a traditional career pattern, the less they show flexibility, leadership-motivation, self-promotion/self-assertion, self-monitoring and networking, and the higher they score on conscientiousness” (p. 52). They also found low sociability, equivalent to Openness, prompted favouring of organisational careers which require less networking, flexibility and social connection than post-organisational careers. Further, Conscientiousness was positively correlated with organisational career aspirations, contrary to their expectations as achievement-orientation might not favour the restrictions
imposed by success planning and promotion pathways. Individuals with lower levels of Emotional Stability are also more likely to gravitate to the stability of organisations than, for example, self-employment.

**Innovation**

Extraversion is linked with enterprising interests (Holland, 1997), continuous improvement (Stewart and Nandkeolyar, 2006) and initiating change through new ideas and processes (Niehoff, 2006). Conscientiousness is also important as innovation not only requires the initiation of change but implementation which capitalises on achievement orientation and goal setting (Zhao and Seibert, 2006), although this positive relationship is challenged by some (George and Zhou, 2001). Ismail (2009), however, found that high levels of Openness, to capitalise on creativity and new ways of doing things, are also required for entrepreneurship (Ismail et al, 2009; Steel et al, 2012).

There is a positive relationship between Agreeableness and innovation as social interaction, trust and networking are required (see Steel et al, 2012), of particular concern among females with very low levels. Nga and Shamuganathan (2010) found that realising innovative ways to enhance the quality of life requires social vision, sustainability, social networks, innovation and financial returns is positively influenced by Openness, Conscientiousness, Emotional Stability and Agreeableness and, at a societal level, these personality traits influenced social entrepreneurship, the initiation and implementation of change and social value in a sustainable and sympathetic way. Further, Openness - in addition to Extraversion - is considered critical for training success (Barrick and Mount, 1991; Moscoso and Iglesias, 2009), future learning critical to organisational development. As low levels of Openness impede entrepreneurship and future learning and Agreeableness the networking required to achieve innovation, findings are mixed
for Australia’s capacity to innovate, particularly as business graduates are pivotal in driving change (BCA, 2006).

**STRATEGIES FOR STAKEHOLDERS**

Typical traits identified in this study provide some explanation for industry dissatisfaction with new graduates. Based on the findings, a number of strategies can be identified to assist both higher education and professional practitioners in enhancing graduate work performance and alleviating persisting skill gaps.

**Professional practitioners**

The study confirms Business graduates rely on their work to provide variety, self-gratification and social fulfilment, augmented by high levels of Extraversion. This has significant implications for organisations which need to motivate, retain and maximise their return on investment in graduates, aggravated further by Generation Y tendencies for high levels of job mobility (Lyons et al, 2012). Appropriate performance management and reward systems, including goal setting and systems of early recognition, should be implemented to motivate, inspire and retain conscientious graduates with promotional pathways and succession planning which reward their achievement orientation.

Despite existing evidence of Business graduates’ appreciation of ethical behaviour and social responsibility, relatively low levels of Agreeableness raises concern and should prompt organisations to nurture the ‘softer’ side of their graduates and highlight the importance of philanthropic endeavours and civic duties. Involving graduates in collaborative initiatives between organisations and community groups to enhance social innovation and well-being are critical for reinforcing this message. Given deficiencies in Agreeableness and evidence of their inability to manage conflict effectively, particular attention should be given to developing
conflict resolution in induction processes and ongoing training and development opportunities. Further, developing graduate confidence in their ability to communicate effectively with others would be beneficial given the low levels of Openness and Agreeableness. Strong oral communication skills are considered one of the most important in new graduates (GCA, 2012) and may be nurtured through formal training methods such as role plays, simulations and case studies (see Jackson, 2013).

Low levels of Openness are associated with weakness in the ability to initiate change (Hermann and Nadkarni, 2013). This key facet to leadership roles urges organisations to consider ways they can nurture and assess a positive orientation towards change in their graduates. The favouring of careers in organisations, rather than self-employment, due to low levels of both Openness and Emotional Stability assists human resource practitioners with attracting new graduates who are content with less networking, flexibility and social connection in their roles than those who are self-employed. It does, however, reinforce concerns for the absence of entrepreneurial spirit, creativity and dynamism among new recruits. Propensity for innovation, enterprise and thinking ‘outside the square’ are critical to change and organisational success and require evaluation in graduate selection scenarios, possibly via personality profiling and/or assessment centres. Attracting and retaining those graduates with high levels of Openness, and therefore having post-organisational career aspirations, is still important and may include implementing flexible working structures, motivational reward systems and fluid promotional pathways, increased networking opportunities and cross-functional working (see Mayrhofer et al, 2005).

**Educators**

Practitioners in higher education should consider ways in which they can nurture both Openness and Agreeableness in their undergraduates. Although many might contest personality
development in adults, there is some evidence to suggest certain traits may be manipulated at university (see Robins et al, 2005). This may be achieved through student-centred learning – encompassing active, problem-based and cooperative learning - and character education - the development of personal and relationship virtues (Benninga et al, 2006). Standalone non-technical programs (see, for example, Jackson, Sibson and Riebe, 2013), coordinated efforts to embed skills and attributes into disciplinary content (see Oliver, 2013) and WIL offerings (Freudenberg et al., 2011) present valuable opportunities for developing attributes and traits. Targeted characteristics would include trustworthiness, generosity, flexibility, compliance, creativity, autonomy, accountability, resolve, humility, tolerance, respect and emotional and intelligence.

Incorporating initiatives into undergraduate education which specifically address documented deficiencies in graduate work performance is critical for bridging endemic skill gaps. Student competitions, skill development programs and WIL, in addition to the ‘Entrepreneurs in Action’ [Enactus] initiative (Jones et al., 2013), are central to developing creativity and enterprise in undergraduates. Providing students with opportunities to participate in volunteering and service learning is important for developing understanding of the importance and principles of corporate and social responsibility. Authentic learning using real life client projects and cases is also invaluable in skill and trait development (Holmes and Miller, 200). The importance of developing conflict management skills in business undergraduates is noted by Lang (2009) with up approximately 25% of a manager’s time spent dealing with conflict. This may be effectively addressed with case studies and role plays, or business simulation (Avramenko, 2012).

**CONCLUSION**

The study provides insight into the personality traits of Australian business graduates and how these vary by certain background/demographic characteristics. Graduates typically display
above average levels of Extraversion; Conscientiousness and Emotional Stability and below average levels of Openness and Agreeableness. Variations in personality traits across demographic and work environment characteristics were very minor, other than for gender. Here, females were significantly higher in Conscientiousness and Agreeableness and lower in Emotional Stability, all aligning with extant literature. Importantly, each gender’s ratings remained above the normative mean rating for each trait other than for Agreeableness in which both males and females were considerably lower. These typical traits and their documented variations broadly align with extant literature and provide some explanation for prevalent skill gaps in and industry dissatisfaction with new Business graduates.

Findings infer Australia’s business graduates are typically diligent and self-disciplined individuals who are high performers and able to manage the pressures imposed by the corporate world. They are achievement-oriented and value traditional, organisational career pathways. They rely on work for social interaction, avoid monotony and have a tendency for job and life satisfaction. Although they are hard-working and thrive socially in the team environment, they may face problems with cooperation, building trust and team cohesion and have difficulties managing conflict effectively. Although they demonstrate some of the required qualities for leadership emergence and transformational leadership, they may favour conventionalism, a problem during periods of rapid global change. Similarly, business graduates may not initiate and manage the innovative processes at the rate needed for Australia to remain globally competitive.

This study’s exploration of personality traits, in the context of their documented impact on workplace behaviour, enriches our understanding of certain deficiencies in graduate workplace performance. The study outlines a number of strategies for employers for recruiting and managing these types of graduates to alleviate prevalent skill gaps. Given the influential role of
personality traits on work performance, the study highlights the need for employers to develop their understanding of staff personality profiles and adapt their performance management processes and professional development offerings accordingly. Assessment of personality traits may occur during graduate recruitment and selection processes, although there are challenges associated with this (see Arthur et al, 2001). In addition, trends in traits are likely to inform future selection criteria, succession planning and career pathway decisions. Greater awareness of the potential impact of low levels of Agreeableness, and to a lesser extent Openness, should also inform pedagogical practice in higher education. Strategies for those responsible for curricula design include embracing the development of certain traits, in addition to managing those areas of work performance which are weakened by typical personality profiles. These include the ability to manage conflict; the importance and principles of ethical behaviour; corporate responsibility and personal accountability; and creativity and entrepreneurial capabilities.

Our understanding of the impact of graduate personality on work performance and prevalent skill gaps should be further developed through future research. This may focus, first, on evaluating the influence of curriculum renewal on nurturing the Openness and Agreeableness traits in Business undergraduates. Second, enhancing our understanding of typical personality traits in other disciplines, and third, assessing the impact within industry of professional development in targeted traits to enhance work performance and alleviate skill gaps. It is important to note the study’s limitations. It operationalises a simple instrument for measuring personality traits which produces relatively low alpha values, consistent with its use in other studies. It relies on self-report data at a single point in time, prompting concerns for common method variance (Podsakoff et al, 2003). Self-report data is, however, still considered most appropriate for studying individual personalities (Klimstra et al, 2012). Despite the wide acceptance of the Five Factor personality model, it is acknowledged there is more to personality beyond these five domains, including lower level facet traits, social-cognitive and motivational
factors and developmental variables (see George et al, 2011). On a positive note, these limitations are counter-balanced by a diverse sample of graduates from a broad range of universities and occupational groups. Findings are of interest to educators and industry not only in Australia but in other culturally and economically-similar countries which also experience graduate skill gaps and need high performing graduates who are productive, innovative and contribute significantly to national growth and global competitiveness.
REFERENCES


Accenture (2013), College graduate employment survey. US, Accenture.


Graduate Careers Australia (GCA), (2012), *Graduate Outlook 2012: the report of the Graduate Outlook Survey*, GCA, Parkville, Australia.


Miller, S., Fredendall, L., Ferreira, W., and Nilson, L. (2006), Identifying Competencies Possessed and the Skills Needed of Entry-Level College Graduate Agribusiness Employees, Clemson University, US.


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<th>Variable</th>
<th>Subgroup</th>
<th>Respondents</th>
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<td>n</td>
<td>%</td>
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<tr>
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<tr>
<td>22-24</td>
<td>370</td>
<td>54.9</td>
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<td>28-30</td>
<td>31</td>
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<td>31-40</td>
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<td>6.2</td>
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<td>13 to 24</td>
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Table 2 Ten-Item Personality Inventory (TIPI) (Gosling et al 2003)

Here are a number of personality traits that may or may not apply to you. Please write a number next to each statement to indicate the extent to which you agree or disagree with that statement.

1 = disagree strongly
2 = disagree moderately
3 = disagree a little
4 = neither agree nor disagree
5 = agree a little
6 = agree moderately
7 = agree strongly

You should rate the extent to which the pair of traits applies to you, even if one characteristic applies more strongly than the other.

I see myself as:
1. _____ Extraverted, enthusiastic.
2. _____ Critical, quarrelsome.
3. _____ Dependable, self-disciplined.
4. _____ Anxious, easily upset.
5. _____ Open to new experiences, complex.
6. _____ Reserved, quiet.
7. _____ Sympathetic, warm.
8. _____ Disorganized, careless.
9. _____ Calm, emotionally stable.
10. _____ Conventional, uncreative.
Table 3 Means and standard deviations across Big Five for sample and TIPI normative data

<table>
<thead>
<tr>
<th>Trait</th>
<th>Sample mean</th>
<th>Sample SD</th>
<th>Normative mean</th>
<th>Normative SD</th>
</tr>
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<td>.96</td>
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<td>5.38</td>
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Table 4 Analysis of variance for personality traits across demographic/background characteristics

<table>
<thead>
<tr>
<th>Variable</th>
<th>Trait</th>
<th>df</th>
<th>MS</th>
<th>F</th>
<th>p-value</th>
<th>$\eta^2$</th>
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<td>.023</td>
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Table 5 Personality trait variations by gender for sample and normative data

<table>
<thead>
<tr>
<th>Trait</th>
<th>Gender</th>
<th>Sample mean</th>
<th>Sample SD</th>
<th>Sample t-value</th>
<th>Normative mean</th>
<th>Normative SD</th>
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<tr>
<td>Conscientiousness</td>
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<td>5.000</td>
<td>4.66</td>
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