Can Personality Traits Modulate Student Engagement with learning and their Attitude to Employability?

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Student engagement in Higher Education is the focus of considerable research, particularly in terms of predicting educational achievement and retention. Less research has examined the predictors of engagement. The current study (students $N = 117$, staff $N = 35$) explores the predictive role of personality in a multidimensional model of engagement. Given recent tensions between the importance of employability and the time academics have to deliver this, a second objective was to examine the correlation between student and staff perceptions of employability. Results found no differences between student and staff attitudes towards employability and further revealed that students' attitudes became less positive over time. Differential patterns of trait relations were found for components of engagement, though agreeableness and conscientiousness were consistent predictors. Findings of individual differences are encouraging in terms of integrating different practices so that different personalities can be engaged. Finally, the decrease in students' attitudes towards engagement and employability highlights important areas for future investigation.

Keywords: Employability, personality, student engagement, staff attitude.

Introduction

The rising pressure in Higher Education (H.E.) for accountability in student learning (Bok, 2006) and enhanced retention rates (Fowler & Boylan, 2010) highlights a need to understand the key predictors of student engagement. Student engagement refers to enthusiasm, inspiration from study, and a mental resilience when studying (Schaufeli, Salanova, Gonzalez-Roma, & Bakker, 2002), and has been shown to predict key outcomes such as grades and persistence (Astin, 1993; Kuh, 2001, 2003) and students' learning (Mega, Ronconi, & DeBeni, 2014). A number of variables such as IQ (Furnham, Monsen & Ahmetoglu, 2009), preferred learning styles and instruction method (Zhang & Huang, 2001) have been associated with engagement, highlighting

the importance of individual differences. In support, Kuh, Cruce, Shoup, Kinzie, and Kinzie (2008) suggest that activities designed to encourage engagement may not have the intended effect if not tailored to the individual. Similarly, if the specific aspects of engagement that need encouraging are not identified, the activity may not have its intended effect. Importantly, previous research focuses on engagement as a predictor of educational outcomes but less research has examined predictors *of* engagement. Given the oft cited role of individual differences (Farsides & Woodfield, 2006) and student attitudes (Gaitán, 2012) in educational settings, the present study explores the relationship between students' personality traits, attitudes towards employability and student engagement.

The concept of student engagement has been defined in numerous ways and has its historic roots in work on student involvement (see Trowler, 2010). More recently, the term has come to be viewed as multi-dimensional with models of engagement capturing cognitive, behavioural and emotional aspects (e.g. Fredricks, Blumenfield & Paris, 2004; Harper & Quaye, 2009; Skinner, Furrer, Marchand, & Kindermann, 2008). Cognitive engagement refers to self-regulated approaches to learning (Fredericks et al., 2004). Emotional aspect of engagement includes feelings linked with learning activities such as interest whereas behavioural engagement refers to activity levels such as effort and persistence (Mayer & Turner, 2002). Supporting this, quality learning has been posited to rely on *behaviours* and *emotions* such as enjoyment of educational tasks, persistence and exertion (Meyer & Turner, 2002). More specifically, Skinner and colleagues (2008) have conceptualised engagement in motivational terms (i.e., students' active participation in the classroom; see also Pierson & Connell, 1992; Wentzel, 1993). However, Lawson and Lawson (2013) have argued that the concept of engagement

should extend beyond institutional boundaries, as family, peer and societal relationships can impact on students' opportunities and interests.–Given our focus on individual level factors such as attitudes towards employability and personality traits, the present study focuses on psychological aspects of engagement (e.g., attitudes towards employability and personality traits) at an individual level. Therefore, the first aim of this study is to investigate the role of individual differences on student engagement using a multi-dimensional model.

Individual Differences and Engagement: The Role of Personality

Research has predominantly focused on engagement as a predictor of objective outcomes such as achievement and grades rather than on engagement itself as the *outcome*. Given the negative relations found between engagement and outcomes such as burnout (Maslach, Shaufeli, & Leiter, 2001) there is a pressing need for research that directly examines the individual difference correlates of engagement. Hence, the present study explores the role of students' "Big-5" personality traits (Costa & McCrae, 1992) on their engagement. Big-5 or "the Five Factor Model" of personality (FFM: Costa & McCrae, 1992) has been accepted as the dominant model for categorising individual differences in personality (Ozer & Benet-Martinez, 2006). The FFM suggests that individual differences in behaviour should be classified in terms of five independent traits, namely extraversion, agreeableness, conscientiousness, emotional stability and imagination; which reflect an individual's characteristic patterns of thought, emotion and behaviour (Chamorro-Premuzic & Furnham, 2008; Costa & McCrae, 1992; Digman, 1990; McCrae & Costa, 1997). The trait of extraversion encompasses facets such as sociability, assertiveness, activity, cheerfulness, and gregariousness. Agreeableness is associated with being cooperative, courteous, trusting, flexible, and

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kind. Conscientiousness denotes dependability, organization, persistence, delay of gratification and achievement-orientation. Neuroticism concerns facets such as, anxiety, and avoidance of stressful situations. Openness concerns flexibility in thinking, fantasy, openness to new ideas and interest in aesthetics (Costa & McCrae, 1992)[1].

The role of personality in academic achievement is well documented (e.g., Farsides & Woodfield, 2006). In particular, conscientiousness has consistently and positively been correlated with exam and essay performance whereas (Heaven, Ciarrochia & Vialle, 2007; O'Connor & Paunonen, 2007) neuroticism has been found to be a negative predictor of academic performance (Landra, Pullman, & Allick, 2007) and examination performance (Chamorro-Premuzic & Furnham, 2003). Academic performance more generally has been associated with agreeableness, conscientiousness and openness to experience (Poropat, 2009). Although the literature has yielded ambiguous results in regard to extraversion (Wolf & Ackerman, 2005), the relationship between FFM and achievement is relatively well documented (see Poropat, 2009 for a meta-analytic review). Nevertheless, the role of the FFM in student engagement has yet to be studied in depth.

Additionally, previous research has typically examined the role of personality on proxies of engagement such as retention (Moses, et al., 2011), academic performance (Glass, Prichard, Lafortune, & Schwab, 2013), and learning approaches (Zhang & Huang, 2001). Support comes from a study by Komarraju and Karau (2005) who reported that the traits of extraversion and openness to experience were related to engagement. Limited research has found a link between agreeableness and engagement

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[1] Although previous literature has used the terms emotional stability (the positive side of the neuroticism scale) and imagination interchangeably with those of neuroticism and openness respectively, we will only use the former terms.

per se, but this does not appear to have been replicated, possibly due to differences in the operationalisation of engagement (see Caspi, Chajut, Saporta, & Beyth-Marom, 2006). Interestingly, research suggests that agreeableness may be related to the emotional regard a student has towards studying (Wise, Skues, & Williams, 2011) (see Furnham, Chamorro-Premuzic & McDouggall, 2002). Critically, these findings indicate the importance of examining a multidimensional model of engagement. In an effort to enhance our theoretical understanding of the nature of engagement, the present study examines the relationship between personality and a multidimensional model of engagement.

Staff and student perceptions of Employability and links with Engagement

An area of increasing importance within the H.E. sector is that of *employability* (Cui, 2015; Lau, Hsu, Acosta, & Hsu, 2014; Yorke, 2004). The increasingly competitive graduate job market has seen an increased emphasis on Personal Development Planning (PDP) to ensure students are equipped with key employability skills (Quality Assurance Agency; QAA, 2009). Although there appears to be a consensus that employability is an integral part of PDP (Bill & Bowen-Jones, 2010; Bleetman & Webb, 2008), there is debate over what exactly employability encompasses (see Harvey, 2001; Vanhercke, De Cuyper, Peeters & De Witte, 2014). Yorke defines employability as "a set of achievements, skills, understandings and personal attributes, that make graduates more likely to gain employment and be successful in their chosen occupations, which benefits themselves, the workforce, the community and the economy" (2004, p. 410). Interestingly, Holmes (2013) goes beyond Yorke's notion of 'skills and attributes' acquisition and makes the distinction between 'possessional' (c.f. skill acquisition; Yorke, 2004), 'positional' (focus on active learning experiences) and 'processual' (the

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learning process extends beyond University) employability (see also Cashian, Clarke & Richardson, 2015; Hinchcliffe & Jolly, 2011).

Highly relevant for present purposes, research has shown that there is a lack of engagement with the concept of employability (Betts & Calabro, 2005; Milner, 2013; Rothwell, Herbert, & Rothwell, 2008). From a teaching and learning perspective, student (e.g., Gaitán, 2012) and staff (e.g., Powell, 2010) perceptions of employability have been shown to be important. Research suggests that employability/PDP are perceived as both useful (Powell, 2010) and negative by academic staff; the latter view including concerns about the pedagogic value being 'outside' academics' role (Clegg & Bradley, 2006). There also appears to be tension between the importance of employability/PDP for graduate recruitment possibilities and the time academics have to deliver such activities. Furthermore, there is a strong correlation between staff and student attitudes towards PDP/employability (e.g. Brennan & Shah, 2003; Cosh, 2008, QAA, 2009), hence, these perceptions are crucial and warrant further exploration.

This study further investigates a less well-researched area: to what extent undergraduate students are engaged with the concept of employability, and how this may relate to staff perceptions of employability. Therefore, in order for the teaching of employability to be effective it is necessary to examine student *and* staff attitudes towards employability, representing the second objective of this study. Student attitudes will also be compared to their Big-5 personality traits to assess the potentially important role of individual differences, within employability initiatives.

In summary, the present study has two objectives (i) to explore the role of Big-5 personality traits on engagement of students and (ii) to contrast staff and student attitudes towards employability. As research has found differences in engagement and

attitudes to employability depending on the year of study (Tymon, 2013) two time points were examined: beginning of Year one (T1) and the end of Year one (T2). Accordingly, we expect to find the following:

- An improvement in students' engagement, their understanding of and attitudes towards employability between T1 and T2 (*H1*)

- A positive correlation between attitudes towards employability and student engagement, as well as between staff and student attitudes towards employability (*H2*)

- A positive relation between Agreeableness and emotional engagement (*H3*)

- A positive relation between both Conscientiousness and imagination and each of emotional and cognitive engagement (*H4*)

Methodology

Participants

One hundred and seventeen first year Psychology undergraduate students[2] (age $M =$ 18.97, $SD = 2.83$) and 35 teaching staff ($M = 44.55$ years, SD = 9.5) from a post-92 UK university participated. Out of these, 79 students (72%) took part at T1. At T2, only 38 participated with an attrition rate[3] of 52%. This is similar to prior attrition rates (Welch

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[2] From a total requested of 150 students, thereby a response rate of 78%. With a 95% confidence interval, this gives a sample error rate of 4.3%, suggesting responses were representative of the cohort.

[3] Given the attrition rate, the Big-5 scores of participants who responded again at Time 2 were compared with the personality scores from those who participated at Time 1 only. None of

& Barlau, 2013). All students belonged to the same cohort of undergraduates. Staff members were recruited from different departments of the university running similar employability programmes (Business, Psychology, and Computing). Ethical approval was obtained from the university.

Students took part by completing an online questionnaire at two occasions; (at T1 & T2. Staff participated once by completing a short paper-based questionnaire about their involvement and attitude towards employability related aspects of the degree.

Measures

Engagement versus Disaffection with Learning.

The behavioural and affective engagement measure was adapted from Mazer's (2012) "Cognitive Engagement Scale" (CES) and Skinner et al.'s (2008) "Engagement versus Disaffection with Learning Scale" (EvDLS). A number of scale items were adapted from both scales to make them more relevant in the current context (Appendix A). Participants responded to the 18 items using a 7-point Likert scale. Five items measured Behavioural Engagement; 4 measured Emotional Engagement and 9 measured Cognitive Engagement. Good internal consistency has been reported for Skinner's EvDLS ($\alpha = .81$; Skinner & Belmont, 1993) and strong construct validity has been reported for both the EvDLS (Fredricks & McColskey, 2012; Skinner et al., 2008) and the CES (Mazer, 2012; 2013).

Students' understanding of employability. To measure students' understanding of employability, a 23-item measure was used with a 7-point Likert scale (Appendix B). These were based primarily on the Personal Development Planning Questionnaire

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the comparisons reached statistical significance, all $p > .05$, suggesting that the data from T1 & T2 can be reasonably compared.

(PDP-Q; Micklewright, 2009), though the wording was changed to reflect the current study's emphasis on employability. Twelve questions were reverse scored. According to Micklewright (2009) the initial PDP-Q questionnaire consisted of 51 items, and an abbreviated version of the PDP-Q was subsequently developed through factor analysis. The questionnaire's construct validity was measured using a Correlation between the questionnaire's total score and the number of Personal Development Programme's external measure (e-portfolio actions) performed over a six-month period. Micklewright reported a positive correlation ($r = .333$, $df=39$, $p < 0.05$) indicating moderate validity (Micklewright, 2009).

Big-5 Personality. To measure personality the 50-item Big-5 International Personality Item Pool (IPIP) was used (Goldberg, 1999; Goldberg, 2001), requiring a response on a 7-point Likert scale, (Appendix C). Ten items measured each of the Big-5 traits; Extraversion, Agreeableness, Conscientiousness, Openness, and, Neuroticism. The IPIP relates strongly to major dimensions of personality and has shown good internal consistency (Gow, Whiteman, Pattie & Deary, 2005). Each factor has shown a mean internal consistency of 0.84 (see Table 2).

Staff and Student Attitudes to Employability. A 15-item questionnaire (Appendix D) was constructed to examine the level of correspondence between student and staff perceptions of employability elements embedded in the curriculum and required responding on a 7-point Likert scale. In line with Hinkin's (1998) guidance on questionnaire development, item generation was informed by previous research (Yorke, 2004; Rothwell et al., 2008, Powell, 2010 & Micklewright, 2009). The questionnaire was concerned with two main areas of employability; (i) the value and the relevance of the employability element in students' future job prospects; and (ii) students and staff

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involvement in employability programme. The same 15 questions were used for both groups, however, the staff version was slightly modified to suit the group and had 3 additional questions. The students ($n = 79$) responded both at T1 and T2, staff responded only once at T1. The three additional questions in the staff questionnaire enquired about their involvement, perceived knowledge, time consumed and the departmental support in delivering employability elements of the curriculum, as these were deemed key to understanding their attitudes towards employability. Eight questions were reverse scored on both versions.

Procedure

The data were collected using Bristol Online Surveys (BOS), and student participants were either rewarded with two research credits for completing both T1 and T2 questionnaires or entered into a prize draw for £20 Amazon book voucher. Recruitment was through the departmental online research participation scheme (SONA). The staff version of the attitude questionnaire was paper based and distributed among academics at different participating departments. No incentive was offered.

Results

Student engagement

BOS does not allow for a two-part questionnaire to be created. Therefore, to be able to link the two parts with each other anonymously, participants were asked to enter their own memorable word[4] at T1, and to use it at T2 to enter and complete the second part.

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[4] However, it should be noted that out of the 38 participants, only 58% (22 participants) accurately recalled their memorable words at T2. Therefore the univariate analyses described in Table 2 have a sample size of 22.

The internal reliabilities (Cronbach's α) for the scales were all satisfactory at T1 and T2 (Table 1).

From T1 to T2, the general engagement and its subscales of cognitive, behavioural and emotional engagement, all showed a decline (Table 1). These results suggest that general engagement and engagement sub-scales (cognitive, behavioural and emotional engagement) were significantly lower at T2 compared with T1. Compared to the range of possible scores, students scored marginally lower on emotional engagement than on cognitive and behavioural engagement at T1. At T2, they scored relatively higher on behavioural engagement than cognitive engagement, and lowest on emotional engagement.

These findings opposed the first hypothesis for the study that engagement would increase over time.

Table 1. Students engagement scores measured at the beginning of the academic year (T1) and measured again after 4 months (T2)

	T1 (n = 79)		T2 (n = 22)			
Scale	Mean (SD)	α	Mean (SD)	α	R	t
General Engagement	94.08 (17.25)	0.94	79.95 (25.66)	0.95	.649**	-3.18**
Cognitive Engagement	46.48 (9.40)	0.88	39.27 (13.39)	0.90	.624**	-3.5**
Behavioural Engagement	27.09 (4.88)	0.80	23.64 (6.61)	0.84	.712**	-2.71*
Emotional Engagement	20.52 (4.66)	0.79	17.05 (6.68)	0.88	.498**	-2.36*
Understanding of employability	110.09 (15.33)	0.86	104.14 (16.93)	0.87	.777**	-1.36
Attitude towards employability	74.29 (11.83)	0.84	73.45 (14.25)	0.87	.459**	0.80

** $p<.01$; * $p<.05$

Student Big-5 personality trait

Table 2 shows the scores for each trait. All reliability (α) coefficients were adequate.

Table 2: Big-5 traits scores for students

Big-5 Trait	Mean (SD)	Range	Reliability (α)
Extraversion	41.94 (11.91)	12-65	0.91
Agreeableness	56.24 (7.75)	34-69	0.78
Conscientiousness	45.58 (10.37)	20-67	0.86
Emotional Stability	35.19 (12.12)	10-67	0.89
Imagination	48.48 (6.34)	28-60	0.61

Student understanding of employability

Students' understanding of and attitude to employability were measured at T1 and T2. Reliabilities were satisfactory at T1 and T2 (Table 1). Their understanding of and attitudes to employability remained unchanged from T1 through T2 (both ps>.05; Table 1), contrary to H1.

Correspondence between staff and student attitudes towards employability programme

To investigate whether there would be a positive correlation between attitudes towards employability (H2), scores on attitudes to employability were compared between the staff[5] and student groups at T1 and T2 using an independent samples t-test. For this comparison, staff only questions were removed from that version. This compares the distribution of the scores between the staff and student groups, and showed no significant difference (t (112) = -0.753, p = 0.45), suggesting that their attitude scores were correlated. The mean scores for staff and students were 73.47 and 74.29

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[5] The internal reliability for the full staff version was 0.86, and for the reduced version 0.85.

respectively, where the highest possible score was 115, suggesting a generally positive attitude towards employability in both samples. Examination of individual question responses for the staff questionnaire showed lower scores for questions on training and support for the delivery of employability, and on the time available to engage and develop the employability skills of students.

Furthermore, the association between understanding of and attitudes to employability, multidimensional engagement, and Big-5 traits were calculated, shown in Table 3. General engagement, engagement subscales, understanding of, and attitudes to, employability were all significantly correlated with one another, supporting H2.

Emotional engagement was significantly correlated with agreeableness, supporting H3, and was also correlated with conscientiousness and imagination (all ps < .001). Engagement, together with the sub-scales of cognitive and behavioural engagement, were significantly correlated with agreeableness, conscientiousness and imagination (all ps < .001). This provided partial support for H4 (conscientiousness and imagination will be positively related to emotional and cognitive engagement). Behavioural engagement was additionally correlated with extraversion ($p < .05$). As shown in Table 3, understanding of employability was significantly correlated with agreeableness and conscientiousness ($p < .05$). Attitude to employability was significantly correlated with agreeableness, emotional stability ($p < .05$) and conscientiousness ($p < .001$).

Table 3. Correlations between general engagement, engagement sub-scales, understanding of employability, attitudes to employability and personality traits in the T1 group.

	Engagement	Cognitive Engagement	Behavioural Engagement	Emotional Engagement	Understanding of Employability	Attitudes to Employability	Extraversion	Agreeableness	Conscientiousness	Emotional Stability
Cognitive Engagement	.97**									
Behavioural Engagement	.91**	.81**								
Emotional Engagement	.88**	.79**	.79**							
Understanding of Employability	.64**	.63**	.55**	.58**						
Attitudes to Employability	.55**	.51**	.48**	.54**	.85*					
Extraversion	.19	.16	.23*	.16	.16	.12				
Agreeableness	.49**	.49**	.42**	.37**	.36*	.30*	.12			
Conscientiousness	.43**	.41**	.41**	.32**	.22*	.30**	-.17	.36**		
Emotional Stability	-.03	-.05	-.04	.03	.14	.25*	.19	-.13	-.02	
Imagination	.32**	.27*	.36**	.29**	.20	.15	.03	.29*	.24*	-.28*

*significant at the 5% level; ** significant at the 1% level

Predicting engagement, understanding of- and attitude to employability through Big-5 traits

To explore whether the Big-5 personality traits are significant predictors of both engagement (general, cognitive, behavioural and emotional), and understanding of and attitude to employability, six multiple regression analyses were conducted (Table 1, Appendix E).

Predicting general engagement through personality traits

Personality traits produced a significant model that accounted for a reasonable degree of variance in engagement: $F(5, 73) = 8.74$, $p < 0.01$, $R^2 = 0.37$. Increases in extraversion ($\beta = 0.20$, $p < 0.05$), agreeableness ($\beta = 0.31$, $p < 0.01$) and conscientiousness ($\beta = 0.31$, $p < 0.01$) were associated with increased general engagement. Neither emotional stability ($\beta = 0.02$, $p > 0.05$) or imagination ($\beta = 0.16$, $p > 0.05$) predicted engagement. Approximately a third of the variance in general engagement was explained by personality partially supporting H4.

Predicting cognitive engagement through personality traits

Personality traits produced a significant model that accounted for a reasonable degree of variance in cognitive engagement: $F(5, 73) = 7.31$, $p < 0.01$, $R^2 = 0.33$. Increases in agreeableness ($\beta = 0.34$, $p < 0.01$) and conscientiousness ($\beta = 0.29$, $p < 0.01$) were both associated with increased cognitive engagement. Neither extraversion ($\beta = 0.17$, $p > 0.05$), emotional stability ($\beta = -0.01$, $p > 0.05$) or imagination ($\beta = 0.10$, $p > 0.05$) predicted cognitive engagement. Personality explained a third of the variance in cognitive engagement.

Predicting behavioural engagement through personality traits

Personality traits produced a significant model that accounted for a reasonable degree of variance in behavioural engagement: $F(5, 73) = 8.19$, $p < 0.01$, $R^2 = 0.36$. Increases in extraversion ($\beta = 0.25$, $p < 0.05$), agreeableness ($\beta = 0.22$, $p < 0.01$), conscientiousness ($\beta = 0.32$, $p < 0.01$) and imagination ($\beta = 0.21$, $p < 0.05$) were all associated with increased behavioural engagement. Emotional stability ($\beta = 0.01$, $p >$

0.05) did not predict behavioural engagement. Behavioural engagement was again well explained by personality, with 30% variance being explained.

Predicting emotional engagement through personality traits

Personality traits produced a significant model that accounted for a reasonable degree of variance in emotional engagement: $F (5, 73) = 4.50, p < 0.05, R^2 = 0.24$. However, neither extraversion ($\beta = 0.15, p > 0.05$), agreeableness ($\beta = 0.23, p > 0.05$), conscientiousness ($\beta = 0.22, p > 0.05$), emotional stability ($\beta = 0.09, p > 0.05$) or imagination ($\beta = 0.11, p > 0.05$) individually predicted emotional engagement. Emotional engagement was only predicted by agreeableness (H3), and this accounted for approximately 18% of the variance.

Predicting understanding of employability through personality traits

Personality traits produced a significant model that accounted for a reasonable degree of variance in understanding of employability: $F (5, 73) = 3.66, p < 0.01, R^2 = 0.20$. An increase in agreeableness ($\beta = 0.30, p < 0.05$) was associated with increased attitudes to and understanding of employability. Neither extraversion ($\beta = 0.10 \, p > 0.05$), conscientiousness ($\beta = 0.15, p > 0.05$) or emotional stability ($\beta = 0.20, p > 0.05$) predicted understanding of employability. Counter to H5, imagination ($\beta = 0.15, p > 0.05$) did not significantly predict understanding of employability. Approximately 15% of the variance was explained by personality, with agreeableness being the only significant predictor.

Students' Attitudes towards employability

Personality traits produced a significant model that accounted for a reasonable degree of variance in attitudes to employability: $F (5, 73) = 4.27, p < 0.01, R^2 = 0.23$.

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An increase in emotional stability ($\beta = 0.30$, $p < 0.01$) was associated with increased attitudes to employability. Neither extraversion ($\beta = 0.07$ $p > 0.05$), agreeableness ($\beta = 0.22$, $p > 0.05$), conscientiousness ($\beta = 0.21$, $p > 0.05$) or imagination ($\beta = 0.12$, $p > 0.05$) predicted attitudes to employability. Seventeen percent of the variance was explained by personality, specifically by emotional stability.

General Discussion

The role of personality on academic achievement is well documented (e.g., Farsides & Woodfield, 2006); however, the influence of personality traits on student engagement, particularly multidimensional models of engagement, is less understood. A major objective of the present study was to explore whether Big-5 personality traits could predict students' general, cognitive, emotional and behavioural engagement. Given the importance of student engagement for academic success (Newmann, Wehlage, & Lamborn, 1992; Marks, 2000) a second objective was to investigate whether student engagement changed over time and how student engagement related to staff engagement. Given the links between employability and student engagement (Senior, Reddy & Senior, 2014; Zepke & Leach, 2010) the study also explored staff and student attitudes toward employability and their relationship.

Key Variables Influencing Student Engagement and Attitudes towards Employability

The role of personality on student engagement was examined and, as predicted, the trait of conscientiousness was an important factor. Specifically, conscientiousness was a significant predictor in all aspects of engagement except emotional engagement. These

findings corroborate a wealth of research on the importance of this trait in educational (Furnham, Chamorro-Premuzic & McDougall, 2002; Heaven, Ciarrochi & Vialle, 2007; O'Connor & Paunonen, 2007) and employment (Barrick, Mount, & Strauss, 1993) settings. In particular, conscientiousness is consistently and positively associated with assessment performance, likely due to the hard-working and motivated nature of this trait (Heaven, Ciarrochi & Vialle, 2007; O'Connor & Paunonen, 2007). The results also converge with previous research by Kim, Shin, and Swanger (2009), who found a positive relationship between conscientiousness and academic engagement. In line with trait definitions of conscientiousness, individuals high in this trait tend to be 'achievement orientated', 'think before they act' and 'plan' – all of which support the present links with cognitive engagement. Interestingly, this trait also encompasses behavioural facets such as 'goal-directed' behaviour, 'purposefulness' and 'prioritising tasks' (John & Srivastava, 1999), hence supporting the relationship with behavioural engagement. The emergence of a non- significant relation between conscientiousness and emotional engagement is also in line with trait definitions and can, to some extent, begin to develop our understanding of the nature of engagement and its key predictors.

Agreeableness was found to be a reliable predictor of general engagement, cognitive, emotional, and behavioural engagement (all ps < .05). Given that agreeableness encompasses facets such as altruism, compliance, and trustworthiness (John & Srivastava, 1999), the current findings suggest that *being engaged* relates to 'trusting' in the educational process and caring about it. Those high in agreeableness also have an optimistic view of human nature (Costa & McCrae, 1992; John & Srivastava, 1999) and may be positive about the educational experience. Support for the role of agreeableness on engagement comes from research by Furnham et al. (2002) who comment that agreeableness may be related to social and emotional aspects of

engagement. However limited research has found this link between agreeableness and engagement *per se*, which may be due to differences in the way that engagement has been operationalised (see Caspi et al., 2006). The finding that agreeableness significantly predicted all aspects of engagement is interesting and warrants further examination.

Although extraversion was not predicted to correlate with engagement, analyses revealed that this trait significantly predicted general and behavioural engagement. While the literature has yielded ambiguous results for the trait of extraversion (Wolf & Ackerman, 2005) this finding makes intuitive sense as extraversion is a behaviourally oriented trait (Costa & McCrae, 1992). This finding further converges with trait definitions as extraverts tend to be optimistic, sociable and assertive and prefer groups (Costa & McCrae, 1992; John & Srivastava, 1999). Extraverted individuals are also more likely to experience vigour; one of the core dimensions of work engagement (Brief & Weiss, 2002). More direct support comes from a study by Komarraju and Karau (2005) who reported that the trait of extraversion is linked to engagement.

Perhaps surprisingly, the hypothesised relation between intellect and engagement was not supported. This trait concerns openness to new ideas, creativity, and capacity for abstract thought and would seem an ideal predictor of engagement, albeit limited research has found this (see Poropat, 2009). It should be noted that the majority of research has examined the role of intellect with achievement outcomes (Paunonen & Ashton, 2001) and intelligence (Ashton, Lee, Vernon, & Jang, 2000). The trait itself has been shown to be a correlate of intelligence (Harris, 2004), and out of all the Big-5 traits has been suggested to be the most controversial and inconsistent (see McCrae, 1993-1994). It will be interesting to see if future research can replicate the present findings for intellect with behavioural, emotional and cognitive engagement.

Taken together, the results for the Big-5 traits and engagement are interesting and encouraging and add to the growing literature surrounding the theoretical basis of the construct of engagement (Zaidi et al., 2013). Clearly, there is still work to be done on the operationalisation of engagement but reliable predictors of engagement can begin to develop our understanding of what it means to 'be engaged' and what qualities can increase the likelihood of engagement. Results suggest that agreeableness and conscientiousness are particularly important predictors of engagement. The pattern of findings are also encouraging in terms of integrating a variety of assessment types and practises into H.E. so that different personalities have opportunities to be cognitively, behaviourally and emotionally engaged. This supports Kuh et al's. (2008) suggestion for activities to be tailored to the individual for maximum engagement.

Does Student Engagement change over time?

A major objective of the present study was to examine whether engagement changed over time. It should be noted that due to the attrition rate from T1 and T2, the linking of participant data through a memorable word or number was shown to be problematic, resulting in a small usable sample size at T2. Nevertheless, results showed that student engagement *decreased* from T1 to T2. Although counter to predictions, this finding makes intuitive sense as students arguably enter H.E. motivated and keen to succeed with unrealistic expectations (King & Walsh, 1972; see also Gerdes & Mallinckrodt, 1994), often termed the *freshman myth*, which may be difficult to maintain. Although further research is needed, this tentative suggestion has been supported (see Harvey, 2001; Vanhercke, et al., 2014). It is plausible that the decrease in engagement is due to differences in students' perceptions and H.E.'s definitions of employability. Interestingly, student and staff attitudes towards employability were significantly

correlated, implying scope to improve both. Indeed, there is a growing literature on the importance of staff attitudes to engagement in terms of its impact on student perceptions (Powell, 2010). Yet at the same time, staff feel overwhelmed and overburdened and some have questioned the importance of PDP in H.E. (Brennan & Shah, 2003; Cosh, 2008). Taken together, these highlight important areas for future investigation.

A strength of the current research was the focus on a multidimensional model of engagement; however, it is important to note that our study focused solely on psychological predictors of engagement (i.e personality and attitudes) but not on sociological or contextual aspects (c.f. Lawson & Lawson, 2013; Eccles & Wang, 2012; Gasper, DeLuca, & Estacion, 2012; Janosz, 2012). Therefore, in addition to the need for replication of the current findings, future studies should explore these broader aspects of engagement which may provide a more nuanced understanding.

How similar are Students and staff attitudes?

Contrary to previous findings reported by Tymon (2013), suggesting a limited alignment between the views of students and staff on the importance of employability, the current study revealed a high correspondence. In line with Brennan and Shah (2003; Cosh, 2008), both groups perceived employability as being valuable and important in students' future. However, the staff attitudes also reflected a perceived need for training, and a perceived lack of time with regards to involvement and development of the employability skills of students.

A successful employability programme impacts on different stakeholders. Future employers, universities, as well as students benefit from broadening the employability elements embedded in any degree programme. Students' employment outcome is one of the major indicators designed to measure the performance of

universities by a variety of HE league tables as well as the government. At the same time, the current labour market needs students who have more than a degree on their CV and are flexible to changes in the market. Furthermore, employability encompasses more complex processes than completing a PDP embedded in the curriculum and acquiring generic skills during the first year of a degree.

The mandatory inclusion of employability has been subject to debate (Pan & Lee, 2011). Through the inclusion of employability elements and PDP in the curriculum, students, probably for the first time, become aware that they need more than a degree to succeed in their career. This "jolt" of awareness might explain the reason for the participants in this study showing lesser opinions towards employability at T2 compared to T1. The results may indicate the necessity of capitalising on this "awareness" and augmenting employability and PDP elements in the curriculum. Employability skills and PDP programmes will equip them with such skills and engage them in their own career building process (c.f. Bridgestock, 2009).

A word of caution

One factor that might limit the study's generalisability is that the sample was drawn from a North West UK university, which in terms of student cohort may be qualitatively different from other universities. According to the "Communities and Local Government report on the English Indices of deprivation" (2007) North West of England is among the regions with highest deprivation indices and lowest employment (Office of National Statistics, 2012). Therefore generalisability may be limited to similar cohorts/regions, though programs focusing on employability are nowadays becoming ubiquitous. Different aspects of employability, particularly positional and processual, could also be assessed (c.f. Yorke, 2004).

Another limitation of the current research is the attrition. Although the finding that engagement over time decreases is in line with numerous studies (see Trowler, 2010, for a review) further research is needed to determine whether the current findings can be replicated. One factor that might have affected the results was group differences between those students who remembered their memorable phrase, and therefore allowing their data from T1 and T2 to be linked, and those students who did not. To rule this out, personality trait and other questionnaire scores of both groups were compared, revealing no significant differences. Future research could adopt a more longitudinal perspective, following students from the first semester until their graduation and tracking attitudes, engagement and academic performance.

Conclusion

Taken together, the findings suggest that there are important individual differences which relate in different ways to students' general, emotional, behavioural and cognitive engagement in learning. Focusing on multidimensional models of engagement appears to offer a promising approach to advancing our theoretical understanding of the nature of student engagement.

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Appendix A

<u>**Students' Engagement Questionnaire**</u>

1. I listen attentively to the tutor during sessions. (Cognitive engagement)
2. I work as hard as I can in this module. (Behavioural engagement)
3. I am keen to learn about the content within this module. (Emotional engagement)
4. I listen attentively to my classmates' contributions during class discussions. (Cognitive engagement)
5. I attend class regularly. (Cognitive engagement)
6. When in class, I participate in class discussions. (Behavioural engagement)
7. I pay attention in class. (Behavioural engagement)
8. Class discussions and activities interest me. (Emotional engagement)
9. I get involved in class activities. (Emotional engagement)
10. I find this module useful and engaging. (Cognitive engagement)
11. I find it difficult to concentrate in this module. (Behavioural engagement)
12. When in this class I often feel bored. (Emotional engagement)
13. I think about how I can utilise the module material outside of University. (Cognitive engagement)
14. I think about how the module material will benefit me in my future career. (Cognitive engagement)
15. I review my notes outside of sessions. (Cognitive engagement)
16. I complete all assignments and module activities to the best of my ability. (Behavioural Engagement)
17. I talk about the module material with others outside of the module. (Cognitive engagement)
18. I often take it upon myself to read additional material on issues relating to employability and employability skills. (Cognitive engagement)

Appendix B

<u>Students' Understanding of employability</u>

1. I think employability skills classes are an important aspect of University Learning.
2. There are sufficient resources for developing my employability skills at University.
3. I think employability skills developed during University will be beneficial to my future employment.
4. I am NOT really interested in employability skills training/activities since I have mainly come to University to learn my chosen subject.
5. It is worthwhile participating in employability activities as well as academic activities.
6. I am responsible for developing my employability skills at University.
7. I think Employability skills classes should be optional at University.
8. I do NOT think there are many opportunities at University to develop my employability skills.
9. Even if I was busy with other academic activities, I would try to find time for employability related activities at University.
10. Other people might think I was wasting my time if I participated in extra activities designed to improve my employability.
11. It is important that I spend some of my time at University on developing my employability skills.
12. There may be better ways than specific employability classes for me to record the development of my employability skills.
13. There is NO value in trying to develop employability skills at University since they do not count towards my degree.
14. I think University career's fairs are useful.
15. I am not sure what skills employers are looking for.
16. I do not have a chosen career path so thinking about employability skills is a waste of time.
17. There will be plenty of time to think about employability when I have completed my degree.
18. I am always aware of the employability skills that I am developing during my University degree.
19. I am aware that the University has careers advisors that I can meet with.
20. I have been to visit a careers advisor since coming to University.
21. Meetings with potential employers would be more beneficial than employability skills classes.
22. There is scope to improve the way employability skills training is delivered on my course.
23. Employability skills do not increase the chance of getting a job.

Appendix C

<u>Big-5; 50 item questionnaire</u>

1. I am the life of the party.
2. I feel little concern for others.
3. I am always prepared.
4. I get stressed out easily.
5. I have a rich vocabulary.
6. I don't talk a lot.
7. I am interested in people.
8. I leave my belongings around.
9. I am relaxed most of the time.
10. I have difficulty understanding abstract ideas.
11. I feel comfortable around people.
12. I insult people.
13. I pay attention to details.
14. I worry about things.
15. I have a vivid imagination.
16. I keep in the background.
17. I sympathize with others' feelings.
18. I make a mess of things.
19. I seldom feel blue.
20. I am not interested in abstract ideas.
21. I start conversations.
22. I am not interested in other people's problems.
23. I get chores done right away.
24. I am easily disturbed.
25. I have excellent ideas.
26. I have little to say.
27. I have a soft heart.
28. I often forget to put things back in their proper place.
29. I get upset easily.
30. I do not have a good imagination.
31. I talk to a lot of different people at parties.
32. I am not really interested in others.
33. I like order.
34. I change my mood a lot.
35. I am quick to understand things.
36. I don't like to draw attention to myself.
37. I take time out for others.
38. I shirk my duties.
39. I have frequent mood swings.
40. I use difficult words.
41. I don't mind being the centre of attention.
42. I feel others' emotions.
43. I follow a schedule.
44. I get irritated easily.
45. I spend time reflecting on things.
46. I am quiet around strangers.
47. I make people feel at ease.
48. I am exacting in my work.

49. I often feel blue.
50. I am full of ideas

Appendix D

<u>Student and staff attitude to employability questionnaire</u>

Students version:

1. I appreciate the value of employability elements in the curriculum.
2. Employability is an unnecessary element in my academic life.
3. Employability is imposed upon me by the university.
4. Employability element has a high pedagogic value for me in terms of my learning and development.
5. Motivation is much more important in succeeding in the future than employability skills.
6. There are too many students and not enough staff to deliver a meaningful employability element in the curriculum.
7. Employability is a very important part of my learning.
8. My tutors have sufficient knowledge about employability to deliver this element.
9. I feel involved in the employability aspect of essential skills module.
10. I benefit from employability elements in my curriculum.
11. Employability without a good job market is waste of time and money.
12. Employability skills are irrelevant for my future job prospects.
13. It is my responsibility to actively look for a job.
14. Employers are more interested in students' degree classification than their employability skills.
15. Employability skills will not increase my chance of getting a job.

Staff version:

1. Employability is an unnecessary element in the academic life of the student.
2. Students appreciate the value of employability elements in the curriculum.
3. Employability is imposed upon students by the department.
4. Employability element has a high pedagogic value for the students.
5. Student motivation is much more important in succeeding in the future than their employability skills.
6. There are too many students and not enough staff to deliver a meaningful employability element in the curriculum.
7. Employability is a very important part of student learning.
8. I have sufficient knowledge about employability to deliver this element.
9. The department offers enough training and support to its staff to deliver employability elements.
10. I have enough time to engage with and develop employability skills of my students.
11. I am involved in the department's employability programme.
12. The students can really benefit from employability elements in their curriculum.
13. Staff should be given the opportunity to get engaged in the development of employability skills of their students.
14. Employability without a good job market is waste of time and money.
15. Employability skills are irrelevant for students future job prospects.
16. It is the responsibility of the student to actively look for jobs .
17. Employers are more interested in students' degree classification than their employability skills.
18. Employability skills do not increase the chance of getting a job.

Table 1: Prediction of engagement and understanding of and attitudes to employability by Big-5 personality traits

GENERAL ENGAGEMENT	*B*	*SE*	β
Constant	-2.37	17.60	
Extraversion	0.29	0.14	0.20*
Agreeableness	0.69	0.23	0.31**
Conscientiousness	0.52	0.17	0.31**
Emotional Stability	0.03	0.14	0.02
Imagination	0.43	0.28	0.16
COGNITIVE ENGAGEMENT			
Constant	0.47	10.83	
Extraversion	0.15	0.09	0.17
Agreeableness	0.45	0.14	0.34**
Conscientiousness	0.29	0.11	0.29**
Emotional Stability	-0.01	0.09	-0.01
Imagination	0.16	0.17	0.10
BEHAVIOURAL ENGAGEMENT			
Constant	0.05	5.03	
Extraversion	0.10	0.04	0.25*
Agreeableness	0.14	0.07	0.22*
Conscientiousness	0.15	0.05	0.32**
Emotional Stability	0.00	0.04	0.01
Imagination	0.16	0.08	0.21*
EMOTIONAL ENGAGEMENT			
Constant	-2.89	4.12	
Extraversion	0.05	0.03	0.15
Agreeableness	0.11	0.06	0.23
Conscientiousness	0.08	0.04	0.22
Emotional Stability	0.03	0.03	0.09
Imagination	0.11	0.07	0.19
UNDERSTANDING EMPLOYABILITY			

Constant	39.36	17.68	
Extraversion	0.13	0.14	0.10
Agreeableness	0.58	0.23	0.30*
Conscientiousness	0.15	0.17	0.10
Emotional Stability	0.25	0.14	0.20
Imagination	0.35	0.28	0.15
ATTITUDES TO EMPLOYABILITY			
Constant	20.81	13.42	
Extraversion	0.07	0.11	0.07
Agreeableness	0.33	0.18	0.22
Conscientiousness	0.24	0.13	0.21
Emotional Stability	0.29	0.11	0.30**
Imagination	0.23	0.21	0.12

$* p <.05, ** p <.01, *** p <.001,$