



Received: 22 December 2016
Accepted: 05 September 2017
First Published: 27 September 2017

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APPLIED PSYCHOLOGY | RESEARCH ARTICLE

I doubt very seriously whether anyone will hire me; factors predicting employability perceptions in higher education

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Abstract: Understanding what makes people feel employable is enhanced by studying both the structural and individual dimensions of human behaviour. This paper examines the relative impact of three variables on perceptions of the employability of students in Higher Education (18–25); the way in which students think about themselves (mindset), their ability to overcome adversity (resilience) and the relationships and values that govern their interactions (social capital). It is reported that perceptions of employability are predicted largely by two subscales of the CD-RISC scale; “support” ($p < .01$, $\eta_p^2 = .07$) and, “goal orientation” ($p < .01$, $\eta_p^2 = .29$) and social capital “bridging” ($P < .01$, $\eta_p^2 = .05$). Whilst mindset had no direct effect on perceived employability, both the fixed and growth mindsets have significant roles to play in personal resilience. We argue that contrary to previous findings, having a fixed mindset possibly supports the building of self-trust, self-respect and an acceptance of why you may be different from others. Results suggest that developing goal-oriented attitudes in students will support stronger beliefs about the extent to which they are employable.

Subjects: Psychological Science; Education Studies; Higher Education

Keywords: goal orientation; career development; emotional development; self-concept; training and development



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PUBLIC INTEREST STATEMENT

Perceiving yourself as employable is key to gaining employment because individuals are more likely to engage in positive behaviours that will lead to secure employment. This paper examines several variables that may contribute to perceptions in higher education students, that they are likely to obtain gainful employment following graduation; the role that mindset, resilience and social networks play in the extent to which students feel employable. Results suggest that the strongest predictors of perceptions of their employability and student ambition are resilience through a goal-orientated attitude, but also through the fostering of external organisational networks. Contrary to results reported elsewhere, having some degree of a fixed mindset may be critical to the setting of maintenance of goals that lead to the perception that one will succeed.

1. Introduction

“I doubt very seriously whether anyone will hire me”, is a quote from the “Confederacy of Dunces”, (John Kennedy Toole, 1980). The comedic story of Ignatius J. Reilly who battles against the prejudices of the people of New Orleans, grudgingly working through a series of jobs that drag him into the underbelly of New Orleans. When individuals are seeking work, what influences how they perceive their chances? We know that personal skills such as occupational expertise and constructs such as anticipation, optimisation and flexibility decrease the chances of unemployment (Artess, Hooley, & Mellors-Bourne, 2016; Van der Heijde & Van der Heijden, 2006), whereas adaptability, career identity and social and professional networks influence success (Artess et al., 2016; Fugate, Kinicki, & Ashforth, 2004). These constructs are however, difficult to integrate into the undergraduate curriculum (Pool & Sewell, 2007).

Ignatius J. Reilly had something in the way of adaptability, but according to this list, very little else that would predict success. This study aims to understand perceived employability by exploring the relationships between the established set of values and attitudes that Higher Education students hold about themselves; their personal resilience, ideas that they hold about the malleability of their abilities and the social capital that governs their interactions with peers and society.

Employability depends on the capacity to gain initial employment, maintain employment and new employment but for the individual this depends on their knowledge, skills and attitudes, the way they deploy those assets, the way they present them to an employer and the context or labour market circumstances in which they seek work. According to the National Union of Students survey, students want universities to better explain employability skills and to provide more support to help them develop these important competencies. Since the Dearing Report (1997) into higher education, employability has been high on the UK Government’s agenda for education (Artess et al., 2016; Moreau & Leathwood, 2006; Tomlinson, 2007). Universities who wish to be positioned to provide an appropriately trained workforce must increase the employability of graduates by helping them to provide employers with hard evidence of their skills, abilities and a practical understanding of the world of work in an evolving, competitive environment. This focus represents a shift in thinking away from a cultural rationale for higher education, towards the advancement of education as an economic function and the remedy for societal inequality through the widening of participation in education (Wilton, 2011).

In line with this logic, employers have been vocal about the skills, knowledge and abilities that they want from their future employees (Artess et al., 2016; HEA, 2016), top choices include communication skills, critical thinking and reasoning skills, facets that are now deliberately targeted within employability strategies, frameworks and curriculum in most universities. Whilst many resources are targeted at developing desirable labour market skills, somewhat less attention is directed at the idea that employability could be a matter of individual attribute or personal characteristic. We know as psychologists that self-belief regulates learning, mastery and success (Forsythe & Johnson, 2016). Individuals with a strong sense of a “can do” attitude are more likely to challenge themselves, persist in the face of failure, see feedback as an opportunity for learning and to feel threatened by the success of others (Bandura, 1993; Forsythe & Johnson, 2016), characteristics that should be relevant to the concept of employability. The central question, which this paper seeks to ask, is what personal attributes influence individual student perceptions of their employability?

1.1. Social capital theory

Defined as “the institutions, the relationships, the attitudes and values that govern interactions among people and contribute to economic and social development” (Grootaert & Van Bastelaer, 2002, p. 4), social capital allows a person to draw on resources from other members of the networks to which they belong. These resources can take the form of useful information, personal relationships or the capacity to organise groups (Andriani, 2013; Paxton, 1999). Increased social capital has been linked with many positive outcomes, such as better public health, lower crime rates and more efficient financial markets (Adler & Kwon, 2002; Andriani, 2013).

It has long since been recognised that interpersonal skills are vital assets to job hunters and that increasing social interaction and encouraging group work within the curriculum from an early age can facilitate the development of such skills (Johnson & Johnson, 1987). Similarly, networking and creating a base of professional contacts is widely known to improve employment prospects (Andriani, 2013; Janasz & Forret, 2008). These findings can translate into social capital theory; those with the best interpersonal skills have the best chance at gaining connections and utilising them to gain potential employment opportunities.

Studies have consistently found that individuals with higher social capital are more likely to have employability success. Those with the largest and strongest networks have the most support and opportunities to grow and develop (Higgins & Kram, 2001; Kwon & Adler, 2014; Seibert, Kraimer, & Crant, 2001). Those with linear authoritative connections further increase their chances of gaining employment (Fugate et al., 2004; Kwon & Adler, 2014). The advantages of social capital as a theory for explaining success in the workplace are well established, however at the time of writing, no studies have been identified that look at social capital and student perceptions of their employability and how those dimensions might be influenced by personal resilience and ideas of the malleability of ability.

1.2. Resilience

Frequently discussed in relation to mental health, resilience is often defined in terms of the ability to overcome adversity and return to a person's previously established functional baseline (Wagnild & Collins, 2009). Resilience has been explored in relation to several themes of interest to organisational psychology, for example stress buffering (Judkins, 2005) and attitudes to work (Avey, Wernsing, & Luthans, 2008). Chen and Lim (2012) found that displaced employees with higher resilience scores also had higher levels of perceived employability. Peterson (2000) suggested that resilient individuals are more likely to have success in gaining employment, as they are confident about their abilities, optimistic about the future and can handle challenges effectively. Scheier and Carver's (1992) study of optimism, a key aspect of resilience, found that optimistic individuals are more likely to perceive opportunities in the workplace and to actively seek new opportunities and challenges. Despite developments in research into the place of resilience in organisational psychology, the literature surrounding resilience and employability is limited.

One explanation is the diversity within the application of resilience theory. Resilience has been used to provide explanations for a wide range of psychological phenomena, with differing approaches used to measure the construct. This has raised questions regarding the reliability of such the measures. Windle, Bennett, and Noyes (2011) carried out a review of the psychometric rigour of widely used resilience scales. The study found no "gold standard" of measurement recommending that future studies using the measures should report reliability statistics.

1.3. Mindset

Mindset theory defines the way that people think about human attributes, such as personality and intelligence, and how their attitude towards these attributes impact on their own ambitions and aspirations. Individuals with a "Fixed Mindset" believe that human intelligence and abilities are fixed and there is nothing that can be done to change these fundamental traits. Individuals with a "Growth Mindset" believe that intelligence and abilities are malleable and can be adjusted through learning and adapting (Dweck, 2006).

Some early studies into mindset touch upon its role in employability, suggesting that those with a growth mindset are more willing to take on new challenges and develop and learn from their mistakes (e.g. Wood & Bandura, 1989). Research has shown that perceived control over one's situation can lead to reduced uncertainty and cause the individual to explore alternative courses of action, thus increasing the individual's ability to cope with change. This attitude has a positive impact on their employability (Fugate, Kinicki, & Scheck, 2002). Research into Mindset and employability is sparse, and the interaction between the two has never been considered in a higher education

student population. An idea that seems broadly based on theory of mindset is locus of control. Individuals with an internal locus believe that they can generally influence events around them, whereas externals believe that events are generally beyond their personal control (Rotter, 1966). Studies have found that those with an internal locus are more likely to actively seek new employment opportunities than those with an external locus (Breese & O'Toole, 1995). Dweck (2006) reports mindset as being a dichotomous variable (fixed and growth), however mindset, personality and attitude research suggests that this is unlikely (Arnau, Green, Rosen, Gleaves, & Melancon, 2003; Mercer & Ryan, 2009; Widiger, 1993).

1.4. Social capital, resilience and mindset

No studies to date have measured the collative impact of social capital, resilience and mindset. Literature on the link between mindset and social capital is limited, existing research suggests that, those with a growth mindset are more willing to communicate with, and learn from others (Wood, Phillips, & Taberner, 2002), something that will ultimately increase their social capital. Adaptable and resilient individuals are more likely to seek and maintain useful connections (Seibert et al., 2001), thus increasing their social capital. Fugate et al. (2004) report that that this relationship is bidirectional. The support and information received from these connections can help the individual to better adapt to situations and increase confidence thus increasing their resilience and in turn, their self-perceived employability. Dweck (2012) proposes that those with growth mindsets are more likely to take positives from failures and thus overcome failures more effectively. Likewise, those with an internal locus of control are more adaptable and able to positively view changing situations (Wanberg & Banas, 2000), suggesting that resilient individuals are more likely to have a growth mindset or internal locus of control. The current study aims to understand the extent to which resilience, a growth mindset and social capital will predict a higher level of student self-perceived employability.

2. Methodology

2.1. Participation

One hundred and fifty university students from social sciences (Males 59, Females 91; aged 18–25), completed questionnaires on employability, social capital and resilience and mindset. Most students in this sample were in their final year of study (n99). Students were not paid for their participation, they were encouraged to participate voluntarily through the online survey hosting website, “Qualtrics” which the University of Liverpool subscribes to for the hosting of survey type studies. The online nature of the data collection makes survey completion more convenient for students and it reduces the resource waste associated with paper and pen administration. This study received the relevant university ethical approvals.

3. Observed and modified psychometric scale properties

Following recommendations from Windle et al. (2011) and others the full psychometric properties of the scales were scrutinised for this sample.

3.1. Employability

Self-perceived employability scales are widely used in research and are particularly useful in a student population as participants may not have real-world experience of employment, and it is difficult to conduct real-life employability measures after graduation. The scale used in the current study is The Student Self Perceived Employability Scale (Rothwell, Herbert, & Rothwell, 2008). The scale showed a Chronbach's Alpha of .75, demonstrating good internal consistency. The scale consists of 22 questions measured on a five-point Likert scale (Rothwell et al., 2008). The scale measures three factors: employability, ambition and university commitment. For the purposes of this study, only employability and ambition were examined and reliability data here for Rothwell et al. (2008) presented a Cronbach's Alpha of .80. Scales fell into the expected employability and ambition scales. In general, these scales appear to present sound measurement of the constructs of interest.

3.2. Social capital

The Social Capital scale (Chen, Stanton, Gong, Fang, & Li, 2009) shows excellent reliability and validity, achieving a Chronbach's Alpha of .87. This has been replicated by subsequent validations (Wang, Gong, & Jacques-Tiura, 2013). This scale consists of 10 questions, each with varying subscales measured on a Likert scale. The scale splits social capital into two factors: bonding social capital and bridging social capital. Bonding social capital refers to how well a person is embedded within social networks of people and bridging social capital refers to how well a person is embedded within networks of organisations.

In this study, reliability analysis here for Chen et al., presented a Cronbach's Alpha of .91 demonstrating excellent internal consistency. The Kaiser-Meyer-Olkin measure gave a good score of .813. The Bartlett's test was significant [$p < .01$] therefore factor analysis was appropriate. As predicted by Chen et al., data fell into two factors, accounting for 69% of the variance broadly explaining the categories of Social Capital Bonding and Bridging.

3.3. Resilience

The resilience scale is an adapted version of the Connor Davidson CD-RISC scale (Dong, Nelson, Shah-Haque, Khan, & Ablah, 2013). The CD-RISC scale received one of the better ratings in a review by Windle et al. (2011). However, the review concluded that when all criteria were considered, the quality of the scale was only moderate and required further psychometric testing. The scale spans four factors; flexibility to cope with change and challenge, social and familial support, spiritual support and having a goal orientation. The scale currently demonstrates en face, excellent internal consistency with a Chronbach's Alpha of .94. However, on closer scrutiny Dong et al., appear to assign some items to factor components based on very limited differences in loadings. For example, the item "I prefer to take the lead in problem solving" is deemed to fit on Factor 4, goal orientation (on the basis of the $-.45$ loading). This variable also loads positively onto Factor 1 (coping with change and challenge) at $.42$ but is not highlighted as critical to that subscale. Similarly the item "I think of myself as a strong person" is reported as belonging to Factor 4, with a loading of $-.41$, but it also loads positively onto Factor 1 ($.40$). These splits are largely ignored in the interpretation of the item loadings.

We know that the interpretation of factors can be improved through rotation as it maximises the loading of each variable on the extracted factors whilst minimising the loading on others (Field, 2013). Dong et al., applied an oblique rotation to their data which has the underlying assumption that correlations will exist between the constructs interpreted. Whilst there are some reasonable theoretical arguments to suggest that correlations will exist between the factors on this scale, the oblique rotation in this instance could have resulted in a deviation from the goal of factor analysis to obtain a "meaningful simple structure" Kline (2002, p. 66); a factor should have a few high loadings with the rest being zero, or close to zero.

Data collected for CD-RISC here showed a Cronbach's Alpha of .87, demonstrating excellent internal consistency. However, given concerns over the reliability of this and other measures of resilience, the psychometric properties of all scales were examined and adjusted in line with rotating recommendations by Field (2013). Principle Component Analysis was conducted with orthogonal rotation (Varimax) The Kaiser-Meyer-Olkin Measure of Sampling Adequacy was .81 ("good" according to Field, 2013) and all individual KMOs were greater than .70. Bartlett's test for sphericity was significant $>.01$, indicating that the data was sufficiently large for PCA.

Scree analysis presented 4 factors (Table 1), explaining 49% of the variance, with most items falling onto Factor 1 [26% of the variance]. These items were related to "adaptability", being flexible and versatile. The second component related to "goal orientation", the third "support", the third component spirituality. There were some minor deviations from the Dong et al., structure for example two questions, "I feel obligated to help others in need" and "I have few regrets in life" failed to load on any of the factors. Other items which moved appeared to make more literal sense in their

Table 1. Rotated factor matrix resilience

	Component			
	Adaptability	Goal orientation	Support	Spirituality
I think of myself as strong person	.686			
I can handle unpleasant feelings	.680			
I can deal with whatever comes	.678			
I like challenges	.664			
I tend to bounce back after illness or hardship	.620			
I am not easily discouraged by failure	.614			
Under pressure, I focus and think clearly	.610			
Past success gives me confidence for new challenges	.602			
I am able to adapt to change	.549			
I can make unpopular or difficult decisions	.529			
I prefer to take the lead in problem-solving	.510			
I see the humorous side of things	.438			
I work to attain my goals		.739		
I give my best effort no matter what		.721		
I can achieve my goals		.685		
I have pride in my achievements		.671		
When things look hopeless, I don't give up	.496	.612		
I have a strong sense of purpose	.417	.594		
I find my degree rewarding		.575		
I have close and secure relationships			.746	
My friends are willing to help me make decisions and listen to me			.714	
My family is willing to help me make decisions and listen to me			.562	
I know where to turn for help			.543	
Sometimes fate or God can help				.856
Things happen for a reason				.822
I feel obligated to assist others in need				
I have few regrets in life				

Notes: Extraction method: Principal component analysis.

Rotation method: Varimax with Kaiser normalisation.

*Rotation converged in 7 iterations.

new categories, for example item 13 “I know where to turn to for help” moved from “spiritual support” to “familial and social support”. This new categorisation left only two items in the spiritual support factor, which would not meet the minimum requirement for the number of items loaded into a factor for the scale to be replicable (Raubenheimer, 2004). Campbell-Sills and Stein (2007) created a revision of the original CD-RISC scale and similarly found that whilst both items 3 and 9 loaded into the factor they labelled as faith, item 13 did not.

Table 1 contains a full breakdown of the factor loadings. To determine any impact that the Varimax rotation could have had on the factor loadings, relative to the oblique rotation favoured by Dong et al., the process was repeated with Direct Oblimin however the pattern matrix failed to converge on 25 iterations suggesting that Varimax was the correct choice of rotation. Reliability analysis for

each of the new main scales was high: Factor 1 (.86), Factor 2 (.78) with Factor 3 (.66). Scales with fewer items will present poor validity statistics.

3.4. Mindset

The Mindset scale was devised from the work of Dweck (2006) and adapted for use on school age students. The original scale, reprinted in her 2012 book, contained 8 items and has been reported as having good reliability (Hong, Chiu, Dweck, Lin, & Wan, 1999). Similar validity statistics were found here (Chronbach's Alpha of .80). However, close examination of the questionnaire factor structure suggested that the high alpha was clouding structural differences within the proposed two-factor structure of the Dweck measure. Specifically, there were several dissonance items loading onto the same factor which. For example, "your intelligence is something very basic about you that you can't change very much" loading (.84) with "No matter how much intelligence you have, you can always change it quite a bit" (.75). The two-factor solution that emerged was more suggestive of (i) a factor explaining arguments around theories of intelligence and (ii) a factor accounting for accounting for "personhood". For example, "You are a kind of person and there is not much that can be done to change it", "You can always change the basic things about the kind of person you are". The direct nature of some of the Dweck questions may have elicited more factual responses from students who were largely from a scientific, social sciences and psychology backgrounds. The second issue that emerged was that when applying the Dweck measure only 31 students in the sample could be described as having a "growth mindset".

3.5. Revised mindset for a continuous scale

Tomsett (2015) developed a direct measure of Mindset for the adult population with questions, which do not tap direct understanding of intelligence. The test has never been validated. In line with recommendations by Furr (2011) subject matter expertise was sought to examine test items. Items that could be operating outside of the construct domain, or potentially duplicating domain content in this brief questionnaire were identified and removed. Items 4 and 11 were removed because students have limited control over the commencement of new projects and the self-directed nature of their learning makes it unlikely that they would receive interruptions from lecturing staff. Item 5 was removed because of similarity with item 12. Item 7 was removed because it was felt that the item was unlikely to give sufficient variance, students are already within a superordinate "likeminded student group".

A reliability analysis was performed, by asking 301 undergraduate students. Cronbach's alpha was calculated as a lower bound estimate of reliability. Alpha is reported at .78, increasing to .80 if item 6 were removed (I seek the approval of others—it matters to me that my colleagues think highly of me). Data were normally distribution ($M = 3.17$, $SD = .82$) with a skewness statistic of .464 ($SE = .198$) and a kurtosis statistic of .364 ($SE = .394$). This suggests that mindset may be a continuous variable, rather than a dichotomy of Fixed or Growth, with most individuals falling toward the centre of the distribution.

Principle Component Analysis was conducted on the eight items with orthogonal rotation (Varimax). The Kaiser-Meyer-Olkin Measure of Sampling Adequacy was .86, "good" according to Field (2013). All KMO values for individual items were above .6, with the majority .8 and above. Item 4 had a KMO of .58. Only items below .5 should be seriously considered for removal. All off-diagonal correlations are small and Bartlett's test for sphericity was significant, $p < .01$ indicating that the data were sufficiently large for PCA. Three components had eigenvalues over Kaiser's criterion of 1 and accounted for 71% of the variance. 5 items loaded onto Factor 1 (Table 1) and shared no variance with other factors and presented with high Cronbach's Alpha (.88). 2 items demonstrated unique variance with Factor 2. "I seek the approval of others—it matters to me that my colleagues think highly of me" seems to be tapping a unique concept related to the need for approval.

These results suggest an inability to conduct a concurrent validity test between Tomsett (2015) and the original Dweck measure. However, concurrent reliability tests are considered weak forms of

Table 2. Rotated factor pattern matrix for mindset

	Component		
	Growth	Fixed	Approval
I actively engage with opportunities to learn new things	.882		
I learn from overcoming obstacles in the completion of projects	.863		
I actively seek all feedback and see it as an opportunity to improve	.845		
I seek to engage with fellow students to learn from their success	.813		
I work even harder at things I am not good at	.674		
I am comfortable with my performance and do not feel the need to seek feedback		.793	
There are things that no matter how hard you work you cannot improve		.731	
I seek the approval of others—it matters to me that my colleagues think highly of me			.922

Notes: Extraction method: Principal component analysis.
 Rotation method: Varimax with Kaiser normalisation.
 *Rotation converged in 4 iterations.

validity testing as they often benchmark what is inaccurate and problematic about a test. Had we accepted the high Cronbach Alpha in isolation as an indicator of test suitability, we would have risked committing a type two error. The Dweck 8-item mindset may not be best suited for a University population, particularly when students have developed extensive knowledge of intelligence theory. As such, Tomsett (2015) was applied here to the subsequent analysis (Table 2).

4. Results

4.1. Predicting students perceptions of their employability

The revised scales were applied in the analysis of perceptions of student employability. A General Linear Model, Multi-Variate Regression Analysis was performed with employability and ambition as the dependent variables, mindset, social capital (bonding and bridging) and resilience (goal orientation and social support).

Two variables presented medium effect sizes within the model; Social Capital “Bridging” ($p < .01$, $\eta_p^2 = .05$) and Support ($p < .01$, $\eta_p^2 = .07$). Partial eta squared (η_p^2) explains the variance remaining after excluding variance explained by other predictors. Goal orientation presented a large effect ($p < .01$, $\eta_p^2 = .29$).

For the dependent variable “perceived employability”, goal orientation $f(1,7) 21.45$, $p < .01$ ($p < .01$, $\eta_p^2 = .13$), social capital bridging, $f(1,8) 7.65$, $p < .01$ ($p < .01$, $\eta_p^2 = .05$) and support $f(7,8) 3.89$, $p < .01$, ($p < .01$, $\eta_p^2 = .03$) were significant with goal orientation having the largest effect size. For the dependent variable “ambition”, again the largest effect size was associated with goal orientation $f(1,7) 38.72$, $p < .01$ ($p < .01$, $\eta_p^2 = .22$) with “support” also significant but having a smaller effect $f(1,7) 7.38$, $p < .01$ ($p < .01$, $\eta_p^2 = .05$).

Two final linear multiple regression analyses were performed to determine the factors that make the “goal orientated mindset” and “resilience”. The model explained 58% of the variance within goal orientation model [$f(7.149)$, 27.43, $p < .01$]. With 25% of the variance being accounted for by having a growth mindset [$\beta = .26$, $t(7.149) 4.29$, $p < .01$] and 27% of the variance being accounted for by being “adaptable” [$\beta = -.31$, $t(7.149) 2.13$, $p < .01$]. Having ambition [$\beta = .32$, $t(7.149) 5.21$, $p < .01$] and seeing yourself as “employable” [$\beta = -.31$, $t(7.142)$, 3.19, $p < .01$] are of similar importance.

Resilience was calculated as the mean of its respective subscales (goal orientation, adaptability, support and spirituality). Forty-five per cent of the variance in resilience was accounted for by 4

Figure 1. Factors predicting perceived employability.



variables [$f(6.149), 19.46, p < .01$] with 38% of the variance being accounted for by having a growth mindset [$\beta = .38, t(7.149) 5.50, p < .01$], fixed Mindset accounting for 24% [$\beta = .24, t(7.149) 3.72, p < .01$], ambition [$\beta = .22, t(7.149) 3.23, p < .01$] and perceived employability having a smaller effect [$\beta = .15, t(7.149) 2.29, p < .05$].

Taken together, results suggest that the strongest predictor of the extent to which students feel employable is the extent to which they are orientated to set goals for themselves. Mindset does not directly impact on perceived employability. Rather mindset mediates resilience by influencing goal orientation. Contrary to previous findings, having some degree of fixed mindset is advantageous to the goal setting process. All data met normal assumptions, multi-collinearity was not found to be a concern. Figure 1 presents a diagrammatic representation of the relationship between the variables.

5. Discussion

Mindset may be best considered, not as a dichotomy, but as a continuous variable, a point supported by research into other theories of personality (e.g. Arnau et al., 2003; Widiger, 1993). Similarly, people may hold different mindsets in different contexts. For example, Deweck and Molden (2005) updated mindset theory to take account that children may have a fixed mindset for mathematics, but a Growth Mindset when studying English (Stipek & Gralinski, 1996). With that in mind, rather than relying on one continuous mindset scale, we have provided evidence here for the development of a measure that accounts for the variability in how people may respond to fixed and growth ideas about themselves. To further develop such a scale, more work is needed to understand how individuals maintain, what seem to be, two competing or contradictory ideas at the same time. For example, it is entirely possible to “I work even harder at things I am not good at” and to believe that “there are things that no matter how hard you work you cannot improve”. For that reason, a measure of Mindset based on a structure that permits the researcher to explore the extent to which an individual varies on each factor has logical appeal. Here, we found a two-factor solution for Fixed and

Growth Mindset, with a third emergent variable the “need for approval” that requires further analysis and further item writing for proper evaluation. We recommend that further research into Mindset build on recommendations by MacKenzie, Podsakoff, and Podsakoff (2011) for the development of valid measures by further examining the dimensionality of the Mindset construct.

5.1. Resilience

Inconsistencies exist in the reliability of measures of resilience (Windle et al., 2011), so it was not entirely surprising that the high Cronbach Alpha (.87) for the CD-RISC resilience scale masked differences within the factor structure. It is worth keeping in mind however, that, compared to Dong et al., ($n = 266$), the sample size in question in this study was smaller ($n = 150$). Dong et al., also used a clinical population, whereas the results here are based on the responses of otherwise healthy volunteers. However, the way in which the data has been analysed in this paper represents a more robust approach, as the factor structure adheres to simplicity guidelines. We would also go so far as to argue that two of the extracted factors on this resilience measure (adaptability and goal orientation) are likely to be tapping goal learning orientation, which is the determination to master tasks and to learn all you can about a task, rather than learning to meet benchmarks or standards. This theory, proposed by Dweck (1986), complements her work on mindset theory, in so far as it explains how the growth mindset acts as a motivational construct, because the individual believes that through effort and learning it is possible to improve. That is not to say that goal orientation is not related to personal resilience, but much more work is required to understand and operationalise the construct so that a measure of resilience might ultimately predict behaviour.

To give some direction to future research on the topic of resilience we have examined the relative effects of mindset and self-perceptions of employability. It would seem, that having both a growth and fixed mindset, ambition and perceiving yourself as employable predict resilience. The joint contribution of both growth and fixed mindsets to resilience demonstrates the importance of using a measure that permits the inclusion of competing ideas of the self. One could hypothesise that holding both competing ideas means that no one mindset operates in isolation. Whilst there are many quality attributes to having the growth mindset, in certain circumstances, having a fixed mindset possibly supports the building of self-trust, self-respect and an acceptance of why you may be different from others. Factors essential to developing personal resilience.

5.2. Predictors of self-perceived employability

Previous studies have reported social capital as having a clear impact on employability (e.g. Fugate et al., 2004; Higgins & Kram, 2001; Seibert et al., 2001). Here, we found that social bridging, which is the networking that takes place between different groups who share and exchange information, ideas and build consensus, predicted perceived employability over and above the social bonds that students develop. That is not to say that family and friendship were not important, but the contribution fell into the resilience model rather than social capital. The scale items associated with these two “support” variables are radically different. Social Capital Bonding asks for counts of contacts and support, whereas the resilience model asks for a judgement on the quality of those contacts. This is a possible weakness of a measure of social capital, which relies on ordinal counts. Someone could have large numbers of fellow workers, contacts and memberships, but the quality of these may not be particularly good.

The largest predictor both for perceived employability and ambition was goal orientation, and this finding is possibly one of the most useful to academics because, as it justifies the incorporation of goal orientation development into the employability curriculum. For example, goal setting that aims to encourage the setting and attainment of achievable goals and or self-management, which provides specific training in the cognitive functions, associated with being able to meet these goals (Gist, Stevens, & Bavetta, 1991). The technique is also particularly useful because the focus is on proving competence or ability by attempting to surpass normative performance standards (Nicholls, 1984; Elliot & Murayama, 2008; Hsieh, 2011). The technique has been historically prevalent in the sporting and task performance literature (Celler et al. 2011; Cerasoli, Nicklin, & Ford, 2014), but

experimental (Komarraju & Nadler, 2013; Morisano, Hirsh, Peterson, Pihl, & Shore, 2010) and meta-analytical studies over the past 7 years are now providing compelling evidence that goal setting could be key to student performance and confidence (Ames & Archer, 1988; Garn, Ware, & Solmon, 2011; Huang, Zhang & Broniarczyk, 2012; Steinmayr, Bipp, & Spinath, 2011).

When the different goal setting approaches are taken into consideration it is not surprising that the growth mindset, adaptability, ambition and seeing yourself as employable predict the “goal orientated mindset”. These variables all tap facets of flexibility, effort, achievement and openness to experience. For example, task mastery in goal orientation is driven by an individual’s own beliefs about effort and ability and a desire to learn new skills and increase personal competence. In comparison, performance (ego) goal orientations are characterised by a focus on proving competence or ability, attempting to surpass normative performance standards to perform better than others (Nicholls, 1984). Those that adopt mastery goal orientations have been found to perform better in several areas of education (Garn et al., 2011) as well as adopting more effective strategies, positive attitudes and beliefs (Ames & Archer, 1988).

To conclude, the current study provides a new data of the ways in which social capital, resilience and mindset influence self-perceived employability in a higher education student population. A strong implication of the data reported here is the notion that goal orientation should be more prominent in employability education. Future research should also explore the extent to which student attitudes towards their employability change across their degree pathway and the role that goal orientation plays across time.

Funding

The authors received no direct funding for this research.

Competing Interests

The authors declare no competing interest.

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Citation information

Cite this article as: I doubt very seriously whether anyone will hire me; factors predicting employability perceptions in higher education, Alexandra Forsythe, *Cogent Psychology* (2017), 4: 1385131.

References

- Adler, P. S., & Kwon, S. (2002). Social capital: Prospects for a new concept. *The Academy of Management Review*, 27(1), 17–40.
- Ames, C., & Archer, J. (1988). Achievement goals in the classroom: Students’ learning strategies and motivation processes. *Journal of Educational Psychology*, 80(3), 260–267. <https://doi.org/10.1037/0022-0663.80.3.260>
- Andriani, L. (2013). *Social capital: A road map of theoretical frameworks and empirical limitations* (Working papers in management). Birkbeck University, London.
- Arnau, R. C., Green, B. A., Rosen, D. H., Gleaves, D. H., & Melancon, J. G. (2003). Are Jungian preferences really categorical?: An empirical investigation using taxometric analysis. *Personality and Individual Differences*, 34(2), 233–251. [https://doi.org/10.1016/S0191-8869\(02\)00040-5](https://doi.org/10.1016/S0191-8869(02)00040-5)
- Artess, J., Hooley, T., & Mellors-Bourne, R. (2016). *Employability: A review of the literature 2012 to 2016*. York: HEA.
- Avey, J. B., Wernsing, T. S., & Luthans, F. (2008). Can positive employees help positive organizational change? Impact of psychological capital and emotions on relevant attitudes and behaviors. *The Journal of Applied Behavioral Science*, 44(1), 48–70. <https://doi.org/10.1177/0021886307311470>
- Bandura, A. (1993). Perceived self-efficacy in cognitive development and functioning. *Educational Psychologist*, 28(2), 117–148. https://doi.org/10.1207/s15326985ep2802_3
- Berntson, E., Sverke, M., & Marklund, S. (2006). Predicting perceived employability: Human capital or labour market opportunities? *Economic and Industrial Democracy*, 27(2), 223–244. doi:10.1177/0143831X06063098
- Breese, J. R., & O’Toole, R. (1995). Role exit theory: Applications to adult women college students. *The Career Development Quarterly*, 44, 12–25. <https://doi.org/10.1002/cdq.1995.44.issue-1>
- Campbell-Sills, L., & Stein, M. B. (2007). Psychometric analysis and refinement of the Connor-Davidson resilience scale (CD-RISC): Validation of a 10-item measure of resilience. *Journal of Traumatic Stress*, 20(6), 1019–1028. [https://doi.org/10.1002/\(ISSN\)1573-6598](https://doi.org/10.1002/(ISSN)1573-6598)
- Cellar, D. F., Stuhlmacher, A. F., Young, S. K., Fisher, D. M., Adair, C. K., Haynes, S., ... Riestler, D. (2011). Trait goal orientation, self-regulation, and performance: A meta-analysis. *Journal of Business and Psychology*, 26(4), 467e483. doi:10.1007/s10869-010-9201-6
- Cerasoli, C., Nicklin, J., & Ford, M. (2014). Intrinsic motivation and extrinsic incentives jointly predict performance: A 40-year meta-analysis. *Psychological Bulletin*, 140(4), 980–1008. <https://doi.org/10.1037/a0035661>
- Chen, D. J. Q., & Lim, V. K. G. (2012). Strength in adversity: The influence of psychological capital on job search. *Journal of Organizational Behavior*, 33(6), 811–839. <https://doi.org/10.1002/job.1814>
- Chen, X., Stanton, B., Gong, J., Fang, X., & Li, X. (2009). Personal social capital scale: An instrument for health and behavioural research. *Health Education Research*, 24(2), 306–317.
- Dong, F., Nelson, C., Shah-Haque, S., Khan, A., & Ablah, E. (2013). A modified CD-RISC: Including previously unaccounted for resilience variables. *Kansas Journal of Medicine*, 6(1), 11–20.
- Dweck, C. S. (1986, October). Motivational processes affecting learning. *American Psychologist*, 41(10), 1040–1048. <https://doi.org/10.1037/0003-066X.41.10.1040>

- Dweck, C. S. (2006). *Mindset: The new psychology of success*. New York, NY: Random House Inc.
- Dweck, C. S. (2012). *Mindset, how you can fulfil your potential*. New York, NY: Random House Inc.
- Dweck, C. S., & Molden, D. C. (2005). Self-theories: Their impact on competence motivation and acquisition. In A. J. Elliot & C. S. Dweck (Eds.), *Handbook of competence and motivation* (pp. 122–140). New York, NY: Guilford Press.
- Elliot, A. J., & Murayama, K. (2008). On the measurement of achievement goals: Critique, illustration, and application. *Journal of Educational Psychology*, 100(3), 613. <https://doi.org/10.1037/0022-0663.100.3.613>
- Field, A. P. (2013). *Discovering statistics using IBM SPSS*. Los Angeles, CA: Sage.
- Forsythe, A., & Johnson, S. (2016). Thanks, but no thanks for the feedback. *Assessment and Evaluation in Higher Education*. doi:10.1080/02602938.2016.1202190
- Fugate, M., Kinicki, A. J., & Ashforth, B. E. (2004). Employability: A psycho-social construct, its dimensions, and applications. *Journal of Vocational Behavior*, 65(1), 14–38. <https://doi.org/10.1016/j.jvb.2003.10.005>
- Fugate, M., Kinicki, A. J., & Scheck, C. L. (2002). Coping with an organizational merger over four stages. *Personnel Psychology*, 55, 905–928. <https://doi.org/10.1111/peps.2002.55.issue-4>
- Furr, R. M. (2011). *Scale construction and psychometrics for social and personality psychology*. London: Sage. <https://doi.org/10.4135/9781446287866>
- Garn, A. C., Ware, D. R., & Solmon, M. A. (2011). Student engagement in high school physical education: Do social motivation orientations matter? *Journal of Teaching in Physical Education*, 30, 84–98. <https://doi.org/10.1123/jtpe.30.1.84>
- Gist, M. E., Stevens, C. K., & Bavetta, A. G. (1991). Effects of self-efficacy and post-training intervention on the acquisition and maintenance of complex interpersonal skills. *Personnel psychology*, 44, 837–861.
- Grootaert, C., & Van Bastelaer, T. (2002). *Understanding and measuring social capital: A multidisciplinary tool for practitioners* (Vol. 1). Washington, DC: World Bank Publications. <https://doi.org/10.1596/0-8213-5068-4>
- HEA. (2016). *Enhancing student success in higher education* (HEA White Paper).
- Hong, Y., Chiu, C., Dweck, C. S., Lin, D. M., & Wan, W. (1999). Implicit theories, attributions, and coping: A meaning system approach. *Journal of Personality and Social Psychology*, 77, 588–599. <https://doi.org/10.1037/0022-3514.77.3.588>
- Higgins, M. C., & Kram, K. E. (2001). Reconceptualizing mentoring at work: A developmental network perspective. *Academy of Management Review*, 26, 264–288.
- Hsieh, P.-H. (2011). *Mastery Orientation, Encyclopedia of Child Behavior and Development* (915–916). Berlin: Springer.
- Huang, S. C., Zhang, Y., & Broniarczyk, S. M. (2012, August). So Near and Yet So Far: The Mental Representation of Goal Progress. *Journal of Personality and Social Psychology*, 103(2), 225–241.
- Janasz, S. C., & Forret, M. L. (2008). Learning the art of networking: A critical skill for enhancing social capital and career success. *Journal of Management Education*, 32(5), 629–650. <https://doi.org/10.1177/1052562907307637>
- Johnson, D. W., & Johnson, F. (1987). *Joining together group theory and group skills*. London: Pearson Publishing.
- Judkins, S. (2005). Hardiness, job satisfaction, and stress among home health nurses. *Home Health Care Management Practice*, 17(2), 113–118. <https://doi.org/10.1177/1084822304270020>
- Kline, P. (2002). *An easy guide to factor analysis*. London: Routledge.
- Komaraju, M., & Nadler, D. (2013). Self-efficacy and academic achievement: Why do implicit beliefs, goals, and effort regulation matter? *Learning and Individual Differences*, 25, 67–72. doi:10.1016/j.lindif.2013.01.005
- Kwon, S.-W., & Adler, P. S. (2014). Social capital: Maturation of a field of research. *Academy of Management Review*, 39(4), 412–422. <https://doi.org/10.5465/amr.2014.0210>
- MacKenzie, S. B., Podsakoff, P. M., & Podsakoff, N. P. (2011). Construct measurement and validation procedures in MIS and behavioural research: Integrating new and existing techniques. *MIS quarterly*, 35(2), 293–334.
- Mercer, S., & Ryan, S. (2009). A mindset for EFL: Learners' beliefs about the role of natural talent. *ELT Journal*, 64(4), 436–444.
- Morisano, D., Hirsh, J. B., Peterson, J. B., Pihl, R. O., & Shore, B. M. (2010). Setting, elaborating, and reflecting on personal goals improves academic performance. *Journal of Applied Psychology*, 95(2), 255. <https://doi.org/10.1037/a0018478>
- Moreau, M., & Leathwood, C. (2006). Graduates' employment and the discourse of employability: A critical analysis. *Journal of Education and Work*, 19(4), 305–324. <https://doi.org/10.1080/13639080600867083>
- Nicholls, J. G. (1984). Achievement motivation: Conceptions of ability, subjective experience, task choice, and performance. *Psychological Review*, 91(3), 328. <https://doi.org/10.1037/0033-295X.91.3.328>
- Paxton, P. (1999). Is social capital declining in the United States? A multiple indicator assessment. *American Journal of Sociology*, 105(1), 88–127. <https://doi.org/10.1086/210268>
- Peterson, C. (2000). The future of optimism. *American Psychologist*, 55, 44–55. <https://doi.org/10.1037/0003-066X.55.1.44>
- Pinto, L. H., & Ramalheira, D. C. (2017). Perceived employability of business graduates: The effect of academic performance and extracurricular activities. *Journal of Vocational Behavior*, 99, 165–178. <https://doi.org/10.1016/j.jvb.2017.01.005>
- Pool, L. D., & Sewell, P. (2007). The key to employability: Developing a practical model of graduate employability. *Education + Training*, 49 (4), 277–289. <https://doi.org/10.1108/00400910710754435>
- Raubenheimer, S. A. (2004). An item selection procedure to maximise scale reliability and validity. *Journal of Industrial Psychology*, 30(4), doi:10.4102/sajip.v30i4.168
- Rothwell, A., Herbert, I., & Rothwell, F. (2008). Self-perceived employability: Construction and initial validation of a scale for university students. *Journal of Vocational Behavior*, 73(1), 1–12. <https://doi.org/10.1016/j.jvb.2007.12.001>
- Rotter, J. B. (1966). Generalized expectancies for internal versus external control of reinforcement. *Psychological Monographs*, 80(Whole No. 609), 1–28.
- Scheier, M. F., & Carver, C. S. (1992). Effects of optimism on psychological and physical well-being: Theoretical overview and empirical update. *Cognitive Therapy and Research*, 16, 201–228. <https://doi.org/10.1007/BF01173489>
- Seibert, S. E., Kraimer, M. L., & Crant, J. M. (2001). What do proactive people do? A longitudinal model linking proactive personality and career success. *Personnel Psychology*, 54, 845–874. <https://doi.org/10.1111/peps.2001.54.issue-4>
- Steinmayr, R., Bipp, T., & Spinath, B. (2011). Goal orientations predict academic performance beyond intelligence and personality. *Learning and Individual Differences*, 21(2), 196–200.
- Stipek, D., & Gralinski, J. (1996). Children's beliefs about intelligence and school performance. *Journal of Educational Psychology*, 88(3), 397–407. <https://doi.org/10.1037/0022-0663.88.3.397>

- Tomlinson, M. (2007). Graduate employability and student attitudes and orientations to the labour market. *Journal of Education and Work*, 20(4), 285–304. <https://doi.org/10.1080/13639080701650164>
- Tomsett, J. (2015). *Developing a growth mindset; Developing a staff questionnaire*. Retrieved from <http://johntomsett.com/2015/02/07/this-much-i-know-about-why-we-are-developing-Growth-Mindset-learning-tools/>
- Toole, J. K. (1980). *Confederacy of Dunces*. New York, NY: Grove Press.
- Van der Heijde, C. M., & Van der Heijden, B. I. J. M. (2006). A competence-based and multidimensional operationalization and measurement of employability. *Human Resource Management*, 45, 449–476. [https://doi.org/10.1002/\(ISSN\)1099-050X](https://doi.org/10.1002/(ISSN)1099-050X)
- Wagnild, G. M., & Collins, J. (2009). Assessing resilience. *Journal of Psychosocial Nursing*, 47(12), 28–33.
- Wanberg, C. R., & Banas, J. T. (2000). Predictors and outcomes of openness to changes in a reorganizing workplace. *Journal of Applied Psychology*, 85, 132–142. <https://doi.org/10.1037/0021-9010.85.1.132>
- Wang, P. X., Gong, J., & Jacques-Tiura, A. J. (2013). Reliability and validity of the personal social capital scale 16 and personal social capital scale 8: Two short instruments for survey studies. *Social Indicators Research*, 119, 1133–1148.
- Widiger, T. A. (1993). The DSM-III-R categorical personality disorder diagnoses: A critique and an alternative. *Psychological Inquiry*, 4(2), 75–90. https://doi.org/10.1207/s15327965pli0402_1
- Wilton, N. (2011). Do employability skills really matter in the graduate labour market? The case of business and management graduates. *Work, Employment and Society*, 25(1), 85–100. ISSN 0950-0170 Retrieved from <http://eprints.uwe.ac.uk/14492> <https://doi.org/10.1177/0950017010389244>
- Windle, G., Bennett, K. M., & Noyes, J. (2011). A methodological review of resilience measurement scales. *Health and quality of life outcomes*, 9(8), 1–18.
- Wood, R., & Bandura, A. (1989). Effect of perceived controllability and performance standards on self-regulation of complex decision making. *Journal of Personality and Social Psychology*, 56(5), 805–814.
- Wood, R. E., Phillips, K. W., & Taberner, C. (2002). *Implicit theories of ability, processing dynamics and performance in decision-making groups* (Unpublished manuscript). University of New South Wales, Sydney.



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