

Improved academic performance and enhanced employability? The potential double benefit of proactivity for business graduates

Alex Tymon*

Department of OS and HRM. University of Portsmouth Business School. UK.

&

Dr Sasa Batistic

Department of OS and HRM. University of Portsmouth Business School. UK.

Abstract

This study contributes to proactivity theory and debate on how universities meet competing stakeholder demands in an increasingly marketized higher education environment. We explore how the interplay between the stable facet of proactive personality and the situated behaviour of personal initiative influence academic performance. We hypothesized and found that students high on both these facets of proactivity achieve better academic grades than those low on both, or high in just one. Unexpectedly, high proactive personality with low personal initiative behaviour was the worst combination. Proactivity can be a valuable employability asset, which alongside academic grades is important to some employers as well as students and universities. We argue that nurturing student proactivity can therefore produce multiple benefits but with focus on the more trainable dimension of personal initiative behaviour. To this end we provide practical guidance for university curriculum design to simultaneously enhance graduate employability and academic performance.

Key words: Academic grades; employability; proactivity; university teaching

*Corresponding author. Alex.tymon@port.ac.uk

Introduction

Debate about the role of higher education in developing graduate employability is not new and continues unabated (Shagrir 2015, Turner 2014, van der Merwe, McChlery and Visser 2014). Despite a lack of consensus amongst academics there is increasing expectation from students, employers, governments and tax payers, who in the main fund universities, that more will be done to enhance graduate employability (Tymon 2013, Tran 2015, Vuorinen-Lampila 2014, Knight and Yorke 2003). As a result, universities have much to gain from pedagogic practice that can both maintain traditional academic standards whilst also enhancing employability. We provide a theoretical and practical suggestion in support of Reddy and Moores (2012) who promote the notion of a university education that combines enrichment of intellectual capital alongside development of vocational skills. In doing so, we concur with Jameson, Strudwick, Bond-Taylor and Jones (2012) that academics can protect traditional academic principles whilst also meeting political and economic demands by being proactive in curricula design. This study explores proactivity as an under researched yet valuable subset of graduate employability which we posit may produce such a double benefit (Villar and Albertín 2010, Fugate, Kinicki and Ashforth 2004, Lin et al. 2014).

In contrast to reactive or passive behaviour, proactivity is active, deliberate, change and future oriented (Grant and Ashford 2008, Belschak, Den Hartog, and Fay 2010) and has emerged as a topic of interest among researchers and practitioners in recent years (e.g. Thomas, Whitman, and Viswesvaran 2010, Bindl and Parker 2011). Although not universally appreciated, many organizations seek proactivity in their employees (Crant 2000, Bledow and Frese 2009, Hakanen, Perhoniemi, and Toppinen-Tanner 2008, Den Hartog and Belschak 2007, Griffin, Neal, and

Parker 2007). Perhaps more importantly for graduates, there are valuable individual benefits (Seibert, Kraimer, and Crant 2001, Parker, Williams, and Turner 2006, Fuller Jr, Kester, and Cox 2010) with evidence that enhanced proactivity can improve both job-search effectiveness and numerous elements of longer-term career success (Li, Liang, and Crant 2010, Seibert, Crant, and Kraimer 1999, Fuller and Marler 2009, Brown et al. 2006). The attraction of proactivity to graduate employers and students makes it an important topic for universities. Thus one contribution of this study is the university setting, responding to those who claim the role of context in relation to proactivity is not fully understood (Parker, Bindl, and Strauss 2010, Lin et al. 2014). Importantly we look at the relationship between proactivity and academic grades as a more objective measure of student performance, thus building on previous research which used the subjective measure of academic self-efficacy (Lin et al. 2014).

We contribute further to theory by responding to recent interest in studying possible connections between various proactivity constructs (Thomas, Whitman, and Viswesvaran 2010, Chan 2006, Tornau and Frese 2013). Proactivity is an umbrella term for numerous constructs (Crant 2000), some being behavioural concepts and others personality related or dispositional (Tornau and Frese 2013, Fay and Frese 2001). The differentiation has practical implications in higher education teaching as the behavioural constructs are more malleable and so more trainable than the relatively stable personality oriented ones. Our study enhances understanding of two such facets by looking at the interplay between proactive personality and personal initiative behaviour, complementing and expanding on previous research which looked at correlations between the two (Tornau and Frese 2013, Fay and Frese 2001). We address calls to strengthen the understanding of proactivity (Thomas, Whitman, and Viswesvaran 2010, Chan 2006) and increase the incremental validity of the constructs (Chan and Schmitt 2005, Tornau and Frese

2013) by exploring the moderating effect of proactive personality on personal initiative behavior and outcomes.

Practically, this study provides pedagogic suggestions for university educators. Evidence exists that proactivity can be developed in the higher education context through an integrated approach to good curriculum design (Turner 2014, French et al. 2015, van der Merwe, McChlery and Visser 2014). Our findings may guide such pedagogic design, enabling universities to enhance employability whilst maintaining focus on academic study, thus meeting competing stakeholder expectations. We start by reviewing relevant literature and explaining our methodology. We present results and discuss findings before concluding with recommendations for practice. We end with limitations and ideas for further study.

Theoretical background and hypotheses

Higher education, employability and proactivity

Within an increasingly marketized higher education environment there is academic debate concerning the role of universities in developing graduate employability. Staff continue to be concerned with helping all students learn and achieve the best grades they can (Shagrir 2015), yet lament the struggle and tensions they face in trying to maintain `principled teaching of academic disciplines` (Jameson et al. 2012, 28). Tymon (2013) asks whether universities are the right place for employability development and questions their capability to do so, critiquing how employability is measured. The theme of economization of higher education creating tension, contradictions and competing agendas is echoed by Tomlinson (2012), who explores the implications of expansion of the sector. Relevant to our study, business schools have been a key

growth area for universities in recent decades (Wilton 2011). The perceived vocational utility of business courses potentially attracts more instrumental students and thus it is possible that an employability culture maybe stronger in such settings. Despite the debates on the role of higher education in employability, employment statistics have for some time been used as a key performance indicator for all university faculties (Knight and Yorke 2003) and the UK fee regime has increased this pressure so that Tomlinson states:

“Various stakeholders involved in higher education – be they policy makers, employers and paying students – all appear to be demanding clear and tangible outcomes in response to increasing economic stakes.” (2012, 411).

However, universities may not be responding well to this challenge, with on-going criticism of their ability to turn out work-ready graduates and nurture key employability characteristics (Jackson and Chapman 2011, Tran 2015, Tomlinson 2007).

Some of this discontent is due to the disparate definitions and interpretations of employability. Generally academics recognise that the most often cited skills, communications and team working (Tymon, 2013), can be embedded into the curriculum without having to replace technical content or sacrifice development of the critical thinking associated with a traditional university education (French et al. 2015). However beyond this, agreement is lacking on what employability is and how it could or should be developed by universities. In response, we concur with Lin et al. (2014) and believe an important and neglected subset of graduate employability in the literature is proactivity, with only limited theoretical evidence in existence (Villar and Albertín 2010, Fugate, Kinicki, and Ashforth 2004).

It is claimed that many employers see proactivity as a necessity in dynamic and global economies (Den Hartog and Belschak 2007, Griffin, Neal, and Parker 2007). Such employers

assert the value of self-management, creativity, innovation and perseverance and claim to seek staff who embrace personal and organisational change as opposed to resisting it (Crant 2000, Bledow and Frese 2009, Hakanen, Perhoniemi, and Toppinen-Tanner 2008). Tomlinson (2012) is more sceptical, suggesting that many traditional graduate level jobs have been standardized and routinized in a free-market neoliberal world which may indicate proactivity would not be appreciated. However, he goes on to emphasise that in such an environment proactivity may be increasingly important for individuals with a growing focus on personal responsibility for career management and sustainability (Tomlinson 2012). Proactivity is valuable to individuals entering the labour market because effective job hunting involves self-starting activities (Seibert, Kraimer, and Crant 2001, Parker, Williams and Turner 2006, Fuller Jr, Kester and Cox 2010). In particular, for graduates `evidence shows that the transition from higher education to the labour market involves an active process` (Tomlinson 2007, 301). Graduates higher in proactive personality have increased job search self-efficacy and the resulting effort applied to job hunting, unsurprisingly, produces more job offers (Brown et al. 2006).

Many graduates, especially those who have chosen more vocational courses, are likely to be attracted to other benefits associated with higher proactivity. Such students invest time and money in their human and social capital in order to enhance their career success (Tomlinson 2007). These potential proactivity benefits include greater job satisfaction and career success, improved performance ratings, more promotions and higher salaries (Li, Liang, and Crant 2010, Seibert, Crant and Kraimer 1999, Fuller and Marler 2009). The wealth of potential benefits to students, alongside the attraction of proactivity to employers, provides a rationale for universities to be interested in how this graduate employability attribute may be developed. However, proactivity is a complex and multi-faceted construct.

There are subtle differences in the various constructs that come under the umbrella term of proactivity (Tornau and Frese 2013, Fay and Frese 2001, Crant 2000). In the university context these differences matter as they affect the extent to which proactivity can be learned and thus taught. Some proactivity constructs such as proactive personality are considered to be dispositional - deep rooted individual traits, formed early and more stable over time (Parker and Collins 2010, Grant and Ashford 2008). Development of personality is a contentious issue and according to Wellman (2010, 912): `Believing that higher education institutions have the ability to “teach” such traits may depend upon which side of the nomothetic vs idiographic fence one is sitting`. The meta-analysis of Fuller and Marler (2009) showed that proactive personality is a transferable attribute, positively related to career success across organizations. The few studies that report on age have not found a significant correlation (Erdogan and Bauer 2005, Bertolino, Truxillo, and Fraccaroli 2011) supporting the idea of the stable disposition. Therefore, the implication is that proactive personality may change little as a result of learning, training or education interventions.

Conversely, other proactivity constructs can be taught and developed (Chan 2006, Brown et al. 2006, Grant and Ashford 2008, Kirby, Kirby and Lewis 2002). These behavioural and less stable constructs include voice, taking charge and personal initiative behaviour (Bledow and Frese 2009, Parker and Collins 2010, Tornau and Frese 2013). Importantly, recent studies suggest personal initiative behaviour can be developed through integrated and constructivist approaches to pedagogic design without compromising traditional academic content (Turner 2014, French et al. 2015, van der Merwe, McChlery, and Visser 2014). Suggested teaching content includes change management techniques (Hughes 2010) and the proactive *process* of anticipation, planning and striving (Grant and Ashford 2008). Teaching methods proposed are

integrative assignments with cognitive and practical elements that encourage self-directed learning and critical thinking (van der Merwe, McChlery, and Visser 2014). Such learning can then be reinforced by lecturers role modelling and positively rewarding personal initiative behaviour (Parker 1998). Such teaching content and methods can develop student proactivity and make them more attractive to employers, thus contributing to the employability agenda. However, we assert that there may be a simultaneous, additional and more academically oriented benefit; that of improved academic performance.

Proactive personality and academic performance

Proactive personality has been both conceptually and empirically linked to superior individual performance in a range of contexts. Proactive individuals tend to engage in a variety of instrumental behaviours for personal gain such as goal setting, information seeking, innovation, negotiation, resource gathering, skill development and social networking (e.g. Ashford and Black 1996, Villar and Albertín 2010, Parker and Collins 2010, Thompson 2005, Fuller Jr, Kester, and Cox 2010, Seibert, Kraimer, and Crant 2001). Proactive personality is linked to high self-esteem, internal locus of control and motivation to achieve and succeed (Fuller and Marler 2009). A proactive disposition drives individuals to consistently `scan for opportunities, show initiative, take action and persevere until they reach closure by bringing about change` (Bateman and Crant 1993, 105).

As a dispositional construct, proactive personality is generic, relatively stable and therefore transferable between contexts (Crant 2000, Grant and Ashford 2008). Thus we reason that students high on proactive personality will be instrumental in scanning the environment,

anticipating possible future problems and engaging in behaviours to overcome these. One future problem often discussed with business students is finding employment. For more proactive students one solution to finding employment may be achieving high academic grades as these are used as a shortlisting tool by employers (cf. Tomlinson 2008, 2007). Additionally, proactive personality has been positively related to learning motivation and therefore successful acquisition of new knowledge and skills (Major, Turner, and Fletcher 2006), thus we believe it should be linked to academic achievement. Lin et al (2014) showed that proactive personality predicts academic self-efficacy. Such beliefs in ability are known to positively affect actual performance, thus we propose that higher proactivity should be related to higher academic grades.

Hypothesis 1: Proactive personality is positively related to academic performance.

Personal initiative behaviour and academic performance

Personal initiative behaviour is characterized by its self-starting nature, its proactive approach, and by being persistent in overcoming difficulties that arise in the pursuit of a goal (Frese and Fay 2001, 133). Considered to be a situated behaviour, it is more malleable and perhaps trainable, than the personality facets of proactivity, but also less transferable between contexts (Bledow and Frese 2009). In other words, people can learn how to be self-starting, persistent and overcome obstacles in different situations and when such behaviours may be appropriate. In essence, proactive personality is the driver for action, but personal initiative behaviour may dictate how proactivity is enacted by enhancing situational judgement evaluation (Frese and Fay 2001).

The degree of personal initiative shown affects performance. Individuals with higher levels of personal initiative are more likely to change their behaviour appropriately, if needed, than those with low levels who take conventional paths, accept existing conditions and concentrate on managing their emotions (Frese and Fay 2001). In the work context, those higher on personal initiative are known to negotiate flexible working conditions with better development opportunities (Hornung, Rousseau, and Glaser 2008) and are evaluated more favourably by their supervisors (Thompson 2005, Bledow and Frese 2009). Successful study at university requires an active approach to `manage the cognitive and affective processes involved in learning` (Villar and Albertín 2010, 138). Therefore we expect that students high in personal initiative behaviour will work towards achieving better academic grades as they have learned how to study effectively and understand this may lead to enhanced employability (cf. Tomlinson 2008).

Hypothesis 2: Personal initiative is positively related to academic performance.

The interplay between personal initiative and proactive personality and academic performance

Recent interest has been in studying possible interplays between the various proactivity constructs (Thomas, Whitman, and Viswesvaran 2010, Chan 2006). Proactive personality and personal initiative have been shown as moderately correlated, between .28 and .34 (Fay and Frese 2001, Tornau and Frese 2013), which suggests an acceptable discriminant validity between behaviour and personality. Less clear is the process linking proactive personality to behaviour and then outcomes, using alternative measurement tools (Tornau and Frese 2013). We seek practical and theoretical contributions by going beyond correlation analysis and explore the interplay between the stable trait of proactive personality and the more malleable construct of

personal initiative behaviour. We believe both facets of proactivity are two sides of the same coin and the interaction between them is important. The level of proactive personality possessed by individuals affects how they perceive situations in general, whereas the level of personal initiative behaviour affects how change is enacted (Chan 2006, Frese and Fay 2001, Tornau and Frese 2013).

Individuals with high levels of proactive personality are by nature constantly looking for what they see as better ways to do things, and championing for their ideas, yet how they approach change is determined by their situated personal initiative behaviour (Chan 2006, Bledow and Frese 2009). For example, willingness to learn, enthusiastic participation and initiative are some of the most important elements of graduate employability (Fleming et al. 2009, Turner 2014). Yet willingness to learn is a personality trait which alone is of limited value unless it leads to positive action. To be useful, individuals need to know how to study effectively and participate or use their initiative appropriately; and these are learned behaviours. Therefore we contend that a combination of high personal initiative behaviour with high proactive personality will lead students to act in a fitting and productive manner to meet the desired goals of high academic performance and increased employability (Tomlinson 2007).

Hypothesis 3: Proactive personality moderates the relationship between personal initiative and academic performance. The positive relationship is stronger in individuals with higher personal initiative and with higher proactive personality.

Method

Sample and procedure

We collected data from a purposive sample of 166 business school students. 70% female and 30% male, which is representative of the courses selected. 53% were aged 21 years or younger, 22% were between 22 and 25, 11% were between 26 and 30, and 14% were older than 30 years. Our participants completed a combined two-part questionnaire in paper-and-pencil format, taking between 7 and 15 minutes, in classroom settings. To overcome self-selection bias we gained access during normal teaching sessions so that all students in a group were asked to participate. We believe this is important for our study as students high on proactivity may be more likely to volunteer if a self-selection method is used, which would produce a narrower range of scores (cf. Rogelberg et al. 2001).

Measures

To avoid common method bias problems, we collected data from two separate sources: academic achievement from a university dataset and other variables from self-reported measures, which reduces the need for statistical remedies (Podsakoff et al. 2003).

We measured *proactive personality* using the 10-item variant of the Bateman and Crant (1993) original 17-item questionnaire developed by Seibert, Crant and Kraimer (1999) ($\alpha = .77$). Sample items include: “I am constantly on the lookout for new ways to improve my life”; “I can spot a good opportunity before others can”. Seven point Likert scales ranging from strongly disagree (1) to strongly agree (7) were used for all questions.

Personal initiative measurement involves looking for indicators such as creativity, innovation and problem solving (Crant 2000). Bledow and Frese (2009) promote situational judgement tests (SJT) as a useful method for measurement, as personal initiative is defined on the level of observable and situated action for which Likert type scales might not be appropriate. Therefore

we used their 12-item SJT questionnaire which presents descriptions of situations and asks respondents to mentally simulate that they are faced by them. For each hypothetical situation, respondents select from four or five choices the most and least likely action they would perform. A scoring system developed by the authors rates each response as: +1, 0 or -1, giving each question a score range of -2 to + 2. An indicative scenario is: a new computer program has been installed without detailed training which is causing you and others frequent errors and lost time. The possible answers include: organise a training session for you and others, work extra hours to correct the errors, read books to understand the programme, don't get upset about it as more practice will solve the issue.

Academic achievement was captured using degree classification marks (percentage grades were unavailable for all participants) grouped into four bands: 1 = below 40%, 2 = from 40 to 59%, 3 = from 60 to 69% and finally, 4 = 70% and above.

We also controlled for *age*, *gender* and *year of study*. We used age and year of study as a proxy for experience. Proactive personality, being a relatively stable disposition may not be affected by age (cf. Erdogan and Bauer 2005), but personal initiative is a learned situated behaviour and therefore students with more experience may have higher levels. Gender has been linked to academic performance with, in recent years, claims that females are out-performing males at all levels of formal education (Schwartz and Han 2014, Vuorinen-Lampila 2014).

Analysis

We used a variance-based partial least squares (PLS) procedure to analyse our data which has been fruitfully employed as a modelling approach in management research (e.g. Cording, Christmann and King 2008, Ringle, Sinkovics and Henseler 2009). In contrast to covariance-

based structural equation modelling such as LISREL or AMOS, PLS is a component-based approach (Esposito Vinzi et al. 2010). The primary goal of PLS is to maximize the variance explained in latent and endogenous variables (cf. Becker, Klein, and Wetzels 2012), which in our case is the SJT. Additionally, PLS is an appropriate solution for relatively small samples and enables the assessment of indicator and construct reliability as well as correction for measurement error (Bagozzi 1994). Covariance-based structural models require large samples, usually over 200 units, to achieve good estimates of model parameters (Marsh et al. 1998). PLS is immune to this issue as the power in the analysis is maximized (Birkinshaw, Morrison, and Hulland 1995) and does not require assumptions about multivariate normality (Fornell and Bookstein 1982). Given our sample size (n=166), use of an analytical technique that maximized power while permitting simultaneous estimation of path coefficients seemed prudent. We used SmartPLS 2 software to carry out the analyses (Ringle, Wende, and Will 2005). In addition we used bootstrapping with 500 subsamples to generate t-values (Chin 1998).

Results

Descriptive statistics, validity, and reliability

In Table 1 we provide descriptive statistics of all variables analyzed in addition to their correlations and reliability indexes.

Insert Table 1 about here

We analysed individual item reliability, internal consistency, and discriminant validity to examine the acceptability of our measurement model. Factor loadings of measures onto reflective constructs of proactive personality showed good item reliability - all greater than 0.5 (Hulland 1999). The discriminant validity test requires that the construct shares more variance with its items than it shares with other constructs (Hulland 1999). Our data met the test of discriminant validity as the square root variance statistic is greater than the correlations in the corresponding columns and rows (Fornell and Larcker 1981).

For the SJT we looked at the variance inflation factor (VIF) as an indicator of construct reliability. Multicollinearity does not affect the predictive effectiveness of the construct but may lead to estimation bias and unstable indicator coefficients. This could make the indicator validity questionable leading to overall problematic construct reliability (MacKenzie, Podsakoff, and Jarvis 2005). Fortunately our results showed no major concern, with the VIF value below 3.3 and all tolerance values being higher than 0.2, as required (cf. Diamantopoulos and Sigauw 2006). We assessed discriminant validity following convention (MacKenzie, Podsakoff, and Jarvis 2005) and standardized our latent variables, meeting the rule of thumb for this test with correlations between constructs being under 0.71.

Insert Figure 1 about here

Test of hypotheses

In Figure 1 we present the path coefficients for the PLS model. These statistics are standardized regression coefficients and are interpreted similarly to regression analysis coefficients. Also reported are squared multiple correlation coefficients (R^2 statistics) for all constructs. In contrast to other covariance structure analysis modelling, the primary objective of PLS is to minimize errors, meaning there are no overall goodness-of-fit statistics for PLS models. The model is evaluated on the basis of strong indicator loadings, R^2 values, and significance of structural paths (Chin 1998).

Our first hypothesis linking proactive personality with academic success, arguing that this stable trait will lead to proactive engagement with study and therefore better academic outcomes, is not supported ($\beta = -0.065$, n.s.). Our second hypothesis linking personal initiative with academic success, based on claims that students who have learned how to take a targeted, active approach to study will achieve better grades is not supported ($\beta = 0.035$, n.s.). Our third hypothesis explores the moderating effect of proactive personality on the link between personal initiative and academic success. Results support this notion ($\beta = 0.403$, $p < 0.05$), as shown in Figure 2.

The interaction effect in Figure 2 first indicates that the relationship between personal initiative and academic success is positive in individuals with higher levels of proactive personality. Simple slope analysis (Aiken, West, and Reno 1991) indicates that this line is significantly different from zero ($p < .01$). Moreover, it also suggests that to achieve better academic success, students high in proactive personality also need to have high personal initiative. Importantly, we see that those who are lower on both proactive personality and personal initiative achieve better grades than those who are higher on proactive personality but lower on personal initiative.

None of our proposed controls is significantly related to academic success, however we did find a byproduct significant relationship between gender and personal initiative ($\beta = -0.429$, $p < 0.01$) with our model explaining fully 20 percent of the variance in achieving higher academic success.

Insert Figure 2 about here

Discussion

Our study empirically explores the interplay between two facets of proactivity – proactive personality and personal initiative behaviour, in the university context. We contend that higher levels of proactivity is both a desirable attribute for some employers and can also lead to better academic grades. This supports assertions that academic rigor and employability development can be complementary activities (Jackson 2014). Our results show that neither proactive personality, nor personal initiative behaviour on their own, significantly predict students' academic success but taken together, the interplay between both results in higher grades.

One potential reason for the lack of support for our first two hypotheses may be the nature of the constructs themselves. Proactive personality is a driver for action, but personal initiative provides the situational judgement that dictates the actual behaviours displayed (Chan 2006, Bledow and Frese 2009). Thus high proactive personality may have limited value unless it is targeted effectively towards behaviour moderated by situational judgement evaluation. Similarly, high personal initiative may enable students to target study behaviours effectively, but

without the driver of high proactive personality, such abilities may remain under-used if not stimulated.

An interesting finding, not hypothesised, is that that high proactive personality with low personal initiative behaviour appears as the worst combination, resulting in the lowest academic grades. This raises questions about the perception of many that proactive personality is universally positive and supports the findings of Chan (2006) who challenges this assumption.

The only control variable with a finding of note is females having higher personal initiative and academic grades than males. We posit that this may be a contributory factor to the recent reported female advantage in formal education settings (Schwartz and Han 2014, Vuorinen-Lampila 2014).

Theoretical contributions

Firstly, we contribute to the literature on the interplay between various facets of the multidimensional concept of proactivity and provide further empirical evidence that the construct might be nomological in nature (Chan 2006, Thomas, Whitman and Viswesvaran 2010, Tornau and Frese 2013). Our study reinforces the conceptualization of proactivity as both situational and dispositional, suggesting it might be useful to look at such constructs as two sides of the same coin. Our results support this notion as only the interplay of the two facets of proactivity together positively and significantly influence better academic performance.

Secondly, we expand upon the cross-contextual work of Lin et al. (2014) who showed proactive personality positively affected academic self-efficacy. We go further and show that proactivity can enhance academic performance using a more objective measure. Specifically, our results suggest that the best academic grades are achieved in students with both high proactive

personality and high personal initiative behaviour. However, better grades are achieved when there is high personal initiative behaviour, regardless of the levels of proactive personality (see Figure 2). Thus, in the university context, both a situated and dispositional proactivity construct appear complementary which suggests that enhancing these may be valuable for academic achievement, albeit with caveats. One of these caveats links to our third contribution, where we show that high proactive personality on its own leads to the worst academic grades. This adds to the literature on the potential negative outcomes associated with proactivity and we can speculate as to why this may be the case.

Firstly, we wonder whether the self-seeking potential of high proactive personality (Grant and Ashford 2008) detracts from student engagement with the collaborative study methods increasingly used in modern universities (Mackay and Tymon 2014). Secondly, those high on proactive personality by nature constantly search for, and are stimulated by, variety and new ways of doing things (Erdogan and Bauer 2005). We question whether this need is recognised and rewarded by the structured and constrained nature of formulaic university assessments demanded by the increasing pressure for quality control and benchmarking (Turner 2014). Research in organisations tells us that those high on proactive personality are often unable to perform in low autonomy situations (Fuller Jr, Kester, and Cox 2010). As a result, much as employers claim to seek creative, innovative people, they often cannot cope with their rule breaking (Belschak, Den Hartog, and Fay 2010). As Tomlinson (2012) highlights there is a wealth of research on employer expectations, but the extent to which this is rhetoric is questionable. We posit that maybe the same is true in universities. Perhaps recent expansion in student numbers has led to a `mass-produced` form of higher education (Tymon 2013, Vuorinen-Lampila 2014) that does not value, or worse still stifles, those who think outside the box. This

may lead to lower performance levels. A comparative study on proactivity and achievement with different teaching methods and types of assessment may illuminate these points.

Finally, we also know that those high on proactive personality can struggle with self-imposed stress and pressure to act (Grant and Ashford 2008). In the university context, their self-starting, action orientation could drive them to over study, over-perfect or over commit to other activities at the same time. Without the situational judgement provided by personal initiative behaviour they may be unable to decide where to focus or even when it might be better to give up and save resources (Frese and Fay 2001). We argue this reinforces the need for development of personal initiative behaviour.

Practical implications

Many modern businesses claim to seek proactivity and some recognise the advantages of employees who can be self-managing, creative and persevering in ever turbulent times. Additionally, proactivity has vocational advantages for individuals such as students. As Tomlinson (2012, 414) asserts the challenge for today`s graduates is to “develop strategies that mitigate against unemployment and underemployment” as they embark on “increasingly uncertain employment futures” and one such strategy is proactive career management. Proactivity is therefore potentially useful to students and subsequently of interest to universities and society, who are increasingly concerned with graduate employability.

However, not all academics concur with the assumption that higher education is responsible for employability development and believe that traditional university aims of developing intellectual capital and maintaining academic rigor are being compromised (Moreau and Leathwood 2006, Jackson 2009, Kreber 2006). Our research argues that both can be

achieved simultaneously with careful curriculum design and so adds to recent literature that takes a more pragmatic approach to the role of higher education (Shagrir 2015). Such literature urges universities to consider multiple outcomes for different stakeholder groups, supporting the idea that a traditional university aim of enriched intellectual capital can be achieved in addition to, and not instead of, vocational knowledge and skills (Mackay and Tymon 2013, Reddy and Moores 2012). Ironically, in the context of this research, some authors urge educators themselves to be more proactive in order to protect academic principles (Jameson et al. 2012). We show that increased proactivity can lead to higher academic grades, which are used by employers in recruitment decisions, and so are important to students' employability. Theory and research also emphasize the importance of proactivity as a desirable employability characteristic in its own right (Tymon 2013, Fugate, Kinicki and Ashforth 2004, Griffin, Neal and Parker 2007). Therefore students and universities may gain double benefit if proactivity can be enhanced. The question is how may this be done effectively?

To this end, our key finding is that enhancing the more trainable facet of personal initiative behaviour, can lead to better academic performance for those who are either high or low on the less teachable construct of proactive personality. We argue therefore that universities should facilitate learning in personal initiative behaviour so that all students can enhance their academic grades. In particular this would help those who are high on proactive personality make best use of this potentially invaluable disposition as failure to do so results in the lowest academic grades.

To develop personal initiative, recent research commends good pedagogic design, employing an integrated approach (Turner 2014). French, Bailey, van Acker and Wood (2015) use the term 'Capstones' to describe integrative assignments with both cognitive functions and

practical elements to enhance personal initiative. Labelling this a constructivist approach to pedagogic design, van der Merwe, McChlery and Visser (2014, 287) concur that this can 'enhance proactivity in the curriculum'. We therefore recommend the following ideas as examples. Teaching techniques for proactively handling and managing change, based on the premise that most changes can be predicted and appropriate strategies adopted (cf. Hughes 2010). The proactive process of: anticipation, planning and striving (Grant and Ashford 2008) can be embedded in a range of pedagogic activities and assessed artefacts. Critical thinking can be nurtured (Mackay and Tymon 2013), which is linked to proactivity development (Kirby, Kirby, and Lewis 2002). These ideas can be incorporated into modules that encourage critical inquiry and participative learning such as dissertations amongst others (van der Merwe, McChlery, and Visser 2014). Importantly, any and all of these personal initiative behaviours can and should be enhanced by lecturers both modelling and positively reinforcing desired actions (Parker 1998, Mackay and Tymon 2013).

Limitations and future research

Despite our contributions, we recognise limitations, including but not limited to the following. Firstly, focusing only on the interplay between personal initiative behaviour and proactive personality, we exclude other constructs, facets and factors that could influence proactivity. For example the influence of trust, lecturer support and the social cost of behaviour might be considered (Parker, Williams, and Turner 2006). Additionally, we recognize that other factors will impact academic grades, such as students' prior ability and study experiences. Studies could be designed to take these variables into account. Secondly, as our data comes from a cross-sectional sample, we cannot unambiguously infer causality. Future research should

conduct three-wave longitudinal studies that could make causal claims (Ployhart and Vandenberg 2010). Thirdly, using only a UK business school sample limits generalisation of the findings thus validation studies would be helpful.

Future research might explore different teaching and assessment methods to uncover which may have the most impact on personal initiative adding to our understanding of how proactivity works in the university context. Studies might also explore our important and surprising result that those high on proactive personality but low on personal initiative perform least well in terms of academic grades. We suggest that a further multilevel approach and more complex research design (cf. Mathieu and Chen 2011) would be useful. We know from organizational research that ‘situational opportunities and constraints’ play a role in influencing employee behaviours such as organizational citizenship, absenteeism, turnover, and performance (Johns 2006, 386). In the same way situational constraints and opportunities may affect student behaviour and so deserve exploration.

Conclusions

In this study we conduct a partial least squares (PLS) analysis on 166 university students to show that better academic grades are achieved when they possess both high proactive personality and high personal initiative behaviour. Importantly, our results indicate those who are high on proactive personality but low on personal initiative behaviour perform least well. Theoretically we contribute to the growing literature on the potential negative outcomes associated with proactivity and provide empirical evidence, in the university context, that proactivity might be nomological in nature. Practically this study may go some way towards soothing tensions and appeasing those within higher education who question the role of

universities in graduate employability (Tomlinson 2012, Jameson et al. 2012). Shagrir (2015) identifies that academics have different perceptions of their role in higher education; some are more focused on the employability agenda than others. Nevertheless, all lecturers are concerned with academic achievement. Our study provides guidance on one way both agendas can be achieved through development of proactivity, specifically the more malleable and trainable facet of personal initiative behaviour. We propose ideas for an integrated approach to curriculum design that could facilitate employability development without losing academic rigor in teaching, thus producing the potential for double benefit.

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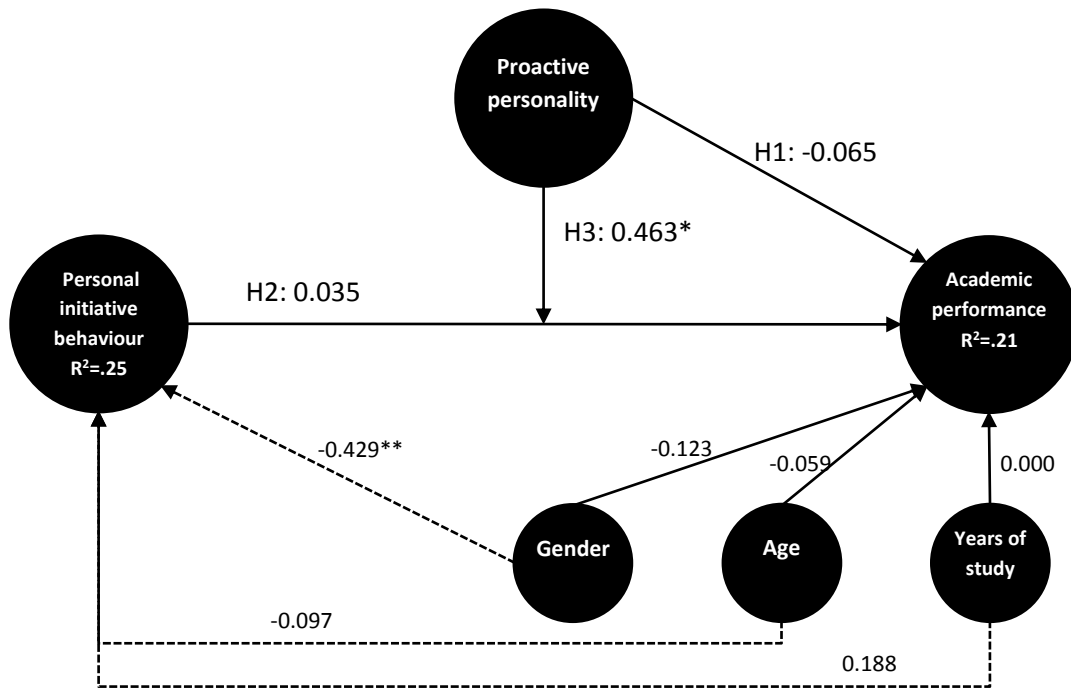
TABLE 1**Means, standard deviations, and correlations among the variables**

Variable	Mean	s.d.	1	2	3	4	5	6
1 Proactive personality	4.78	.87	(.77)					
2 Personal initiative behaviour	0.41	.57	.34**					
3 Academic performance	2.54	1.10	-.14*	.08				
4 Gender	0.30	.46	.11	-.10	-.18**			
5 Age	1.86	1.09	.10	.12	-.14*	-.06		
6 Year of study	2.37	1.31	.02	.11	.04	-.20**	.76**	

Coefficient alphas are on the diagonal in parentheses. * $p < .05$, ** $p < .01$. For gender, 0= female, 1= male. $n=166$

FIGURE 1

Structural model results



Notes: Standardized parameter estimates are shown. ** $p < .01$, * $p < .05$. $n = 166$.

FIGURE 2

Interaction effects between personal initiative behaviour and proactive personality in predicting student academic success

