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Investigating the relationship between career planning, proactivity and employability perceptions amongst higher education students in uncertain labour market conditions

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Abstract

This paper addresses the limited empirical analysis of higher education students' perceptions of contemporary labour market demands. It explores their perspectives on the health of the graduate labour market, what factors determine these and how their perceptions relate to self-perceived employability, career proactivity, career control and efforts to develop positional advantage. Further, the study examines determinants of students' career planning, all in the context of a challenging graduate labour market and higher education systems that have become more market-driven. The paper draws on evidence from a survey among Australian and UK students (*N*=433), from two institutions and across a range of disciplines. Data revealed a number of significant findings. Overall, students who reported more positive perceptions of the current labour market were more likely to develop higher self-perceptions of employability, believe they had a greater sense of control over their career yet were less engaged with proactive career behaviours. Students perceived employability, their sense of career control and their reported career proactivity positively determined their engagement in career planning. The study enhances our understanding of the impact of labour market demand-side factors on student approaches to careers. It raises significant implications for universities and their career practitioners in identifying ways of enhancing students' career planning strategies within a more challenging labour market context.

Keywords

Career planning; perceived employability; labour market; career proactivity; career control.

There are ongoing concerns for the changing nature of the graduate labour market. Higher education (HE) students graduating in developed economies are now increasingly faced with a larger pool of potential recruits seeking entry-level roles given the growth in student enrolments (Li, Harris and Sloane 2018) and a greater likelihood of securing roles that do not utilise their formal qualification (Productivity Commission 2017). The imbalance in tertiary qualified individuals compared with jobs requiring tertiary-level skills may not naturally lead to job upgrading, questioning the value of investing in HE (Chartered Institute of Personnel and Development [CIPD] 2016). Despite the significant pool of graduate recruits, there remain concerns for their work-readiness (Deloitte 2017; National Association of College Employers 2018), catalysing calls to transform universities (EY 2018) and introduce work-based pedagogies, such as degree programs offered in partnership with industry (Pearson 2018), which better prepare students for future employment.

Megatrends in developed economies have exacerbated concerns for graduates' career prospects although some may perceive these in a more optimistic fashion than has been consistently presented (Lent 2018). First, changing working arrangements with more workers entering gig-type work and portfolio careers, defined by casual, part-time and fixed-term employment (Productivity Commission 2017). Second, the Fourth Industrial Revolution (Industry 4.0) - characterised by disruptive technologies such as artificial intelligence, robotics, cloud technology and the sharing economy (World Economic Forum 2016) - brings intense global competitiveness, data security concerns and changes in the demand for skills and occupations (Seet et al. 2018). Third, an economic climate defined by 'fiscal fragility' and 'stagnant economic growth, unemployment and productivity challenges' (Mercer 2017, 1). Coupled with these trends is the emergent dynamic career which contrasts linear, hierarchy-based systems (see Akkermans, Akkermans and Kubush 2017) and the' job for life'. Graduates must therefore be agile, mobile and able to transfer their skills across diverse contexts and industries (Foundation for Young Australians [FYA] 2016). They are likely to hold multiple roles in their career (McCrindle 2015) and should understand their career aspirations and be adept at pursuing aligned roles and opportunities.

Jackson and Bridgstock (2019) argue that HE institutions consider employability to encompass 'short-term employment outcomes, professional readiness, and living and working productively and meaningfully across the lifespan' (454). Recent literature acknowledges individual employability as a complex construct with constituent dimensions spanning professional identity, career self-management, social connectedness, as well as work and life experience (Bridgstock 2016; Jackson 2016; Tomlinson 2017). Increasingly, employer reports highlight the

need for graduates to be flexible, adaptable, embrace new technologies and be able to transfer their skills across diverse contexts (Bakhshi et al. 2017; Cascio 2019). The importance and measurement of external factors - including labour market demand, economic characteristics and recruitment trends - has also featured in employability literature (Hillage and Pollard 1998; Rothwell and Arnold 2007) and there has been much discussion on the reality of graduate careers. There has, however, been little exploration of the influence of Industry 4.0 on career literature (Hirschi 2018) and how students perceive contemporary labour market demands and the impact on their career planning. How, for example, do they gauge the state of the current graduate labour market and the challenges and opportunities it presents, and how does this shape their approaches and motivations? Scurry and Blenkinsop (2011) strongly advocated for future research that acknowledges 'the importance of individuals' sense-making and the meanings that they ascribe to their employment' (652), arguing this is critical for better understanding the consequences of current trends in graduate employment. Understanding how students perceive and have internalised labour demands and any influence on their career planning will inform career development learning and better position HE students to achieve desired career outcomes. Achieving self-defined career success is important not only for individual well-being but also for universities whose success is increasingly measured by their graduates' employment outcomes (Jackson and Bridgstock 2018). Understanding students' career motivations and concerns will also help employers in recruiting, engaging and retaining new graduates.

This study therefore aimed to explore HE students' perspectives on meaningful employment in the contemporary world-of-work. Drawing on a range of career concepts, it sought to explore three research objectives. First, to examine students' perceptions of contemporary labour market demands and what factors determine these. Second, to determine the influence of labour market perceptions on students' perceived employability, proactivity, their sense of career control and efforts to develop positional advantage. Finally, to examine what factors determine students' career planning. Exploring these objectives will enhance our understanding of the impact of labour market demand-side factors on student approaches to careers, helping to shape career development learning in HE. The study gathered survey data from students in a university in Australia and one in the UK. This paper first provides context and rationale for the study through a review of relevant literature, followed by an outline of methodology. Results are presented, followed by interpretation and implications for stakeholders.

Background

Graduate labour market context

The outlook for new graduate careers remains somewhat in question. On the negative side, the digital economy is acknowledged to engender insecurities and some levels of de-skilling through automation and standardisation (Brown, Lauder and Chung 2017) and some traditional graduate roles face uncertain futures (Committee for Economic Development [CEDA] 2015). Many will experience difficulties in securing graduate-level employment due to market saturation (Karmel and Carroll 2016) and could engage in precarious work which lacks protective shelter in the labour market. Globalisation requires mobility and amplifies the pressure to adapt and transfer skills and knowledge across different contexts. Yet with digital disruption comes transformation and, by precedence, increased wages and superior working conditions (Productivity Commission 2017). More certain is graduates' exposure to boundaryless and protean careers, defined by career trajectories which reflect an openness to mobility, embracing movement across diverse settings, career activity driven by values - rather than external factors - and self-direction (see Briscoe, Hall and DeMuth 2006). Here, career progression is not limited to linear, upward movement among a small number of employers but defined by individuals taking responsibility for self-managing their careers amid a wealth of possibilities, requiring them to be adaptable, proactive and plan for career success.

This shift from organisational to self-managed careers has catalysed an increasing need for graduates to internalise the dearth of traditional careers and develop the mindset and skills to effectively identify and navigate career pathways suited to their own circumstances, goals and capabilities. In their notion of individual employability, Fugate, Kinicki and Ashforth (2004) emphasise the importance of flexibility and proactivity in coping with and succeeding in the turbulent environment of boundaryless and self-managed careers. They emphasised career identity, personal adaptability and human and social capital as enabling individuals to enact direction, change and success in their careers. Indeed, agility, self-directed values and adaptable skill sets are the focus of numerous reports offering guidance on how young workers can operate effectively, in multiple roles across diverse sectors and industries, in rapidly changing work environments (for example, FYA 2016, 8).

Student perspectives of contemporary labour market demands

Contemporary work may provide the meaning and reward that millennial graduates' desire, important given they will change jobs to seek fulfilment (Wootton and Grundy 2018). Indeed, recent research has revealed a pervading sense of optimism that empowers how employees' view the world of work (Mercer 2017), including the Deloitte's (2018) graduate survey where Industry 4.0 was viewed largely as an enabler not a threat. Students may be

cognisant of the challenges of the current graduate labour market and may feel threatened by the competition for jobs and widely-publicised rises in underemployment. They may acknowledge the broad concerns around credentialism and the declining value of the degree for attaining graduate-level employment (CIPD 2016). This is particularly so for more generalist degree programs, such as the Arts, Humanities and Social Sciences, compared with professional degrees (for example, Engineering, Education and Health) which are associated with superior employment outcomes (Karmel 2015). Yet Karmel argues that investing in a degree remains worthwhile, supported by graduates' relatively higher salaries and more favourable employment prospects. Tomlinson (2008) found that students understand the declining role their academic qualification plays in the 'congested labour market', aligning with others who reported student acknowledgement of the need to create positional advantage to improve employment prospects (Roulin and Bangerter 2013). Scurry and Blenkinsop (2011) observed that heterogeneity among graduate cohorts questions our assumptions regarding their ideal type of employment and further exploration is required. This study therefore gauges how students perceive the labour market during their studies, investigating how perspectives may vary across different discipline areas.

Labour market perceptions, perceived employability and career behaviour

Perceived employability

Self-perceived employability concerns 'what it [employability] actually means to individuals in the context of their experiences, their aspirations, and their perceptions of their ability to compete in the external labor market' (Rothwell, Herbert and Rothwell 2008, 153). Established scales for perceived employability (Berntson and Marklund 2007; Rothwell and Arnold 2007) indirectly draw on the individual's interpretation of external labour market conditions. Interestingly, recent studies have suggested students are reasonably positive in their perceptions of their own employability (Jackson and Wilton 2017) yet this may be attributed to poor awareness of saturation in the graduate labour market (Rothwell and Arnold 2007). Accordingly, we present the following hypothesis:

H_1: Negative perceptions of the labour market will be associated with lower levels of perceived employability.

Sense of career control

Career adaptability (Savickas and Porfeli 2012), a multi-dimensional construct which spans career concern, career control, career curiosity and career confidence, will enable students to adapt and respond to labour market challenges (Tomlinson 2017). Career control is also considered to be multi-faceted, defined by internal expectations of control – demonstrated by agency, commitment, and initiative - and the influence of external

others and luck or chance (for example, Millar and Shevlin 2007). Focusing on internality, Coetzee and Stolz (2015) define career control as 'the perceived personal control over the vocational future and the belief about personal responsibility for constructing one's career' (86). Deloitte (2016) found that 77% of millennial graduates feel in control of their careers yet this may differ for students who are not yet at work. Perceptions of career control may also vary by degree type. One might expect students undertaking generalist degree programs to feel less in control of their career due to less clearly established career pathways, as well as widely publicised weak employment outcomes compared with professional degrees (Social Research Centre 2019). The relationship between the internalisation of labour market demands and perceptions of career control among university students currently lacks empirical investigation, therefore the following hypothesis was developed:

H_2: Negative perceptions of the labour market will be associated with a weaker sense of control over one's career.

Proactivity

There also remains a limited evidence base on the relationship between how active or passive students are in their attitude to their careers and their career planning. Previous research has provided qualitative insight on student orientations to the labour market and its bearing on their employability management (Tomlinson 2007). This revealed distinctions between career-driven students who demonstrated early career planning engagement and those who were more passive and less propended to maximising their post-university outcomes. Proactivity in forming goals and aspirations were related to broader perceptions of employability and the state of the labour market; and such proactivity tends to result in students more effectively engaging with the labour market and developing purposive strategies towards managing their future employability. Fugate et al. (2004) highlighted how proactive career behaviour 'enhanced one's ability to identify and realise career opportunities' (21). That deteriorating employment outcomes have prompted students to seek ways to enhance their labour market appeal (Gates 2014) might also suggest greater career proactivity in uncertain economic times, particularly given the widely documented impact of automation on future roles (CEDA 2015). Further, Kinash et al. (2016) and Gardiner (2015) reported that students who are more proactive in their career development learning will better manage the challenges posed by the labour market. We therefore seek to provide further empirical evidence on proactivity and its relationship to perceptions of the labour market and purport:

H_3: Negative perceptions of the labour market will be associated with greater career proactivity.

Positional advantage

Given the declining value of formal credentials (university degrees), there has been growing attention to the different ways students can achieve positional advantage in the labour market. Brown and Hesketh (2004) introduced the notion of players (careerists who are attentive to their relative value in the job market) and purists (focused on meritocracy and their own abilities and credentials without consideration of other potential recruits). Students assume responsibility for their employability and participate in extra-curricular activities (ECA), 'soft credentials' beyond formal learning, to gain positional advantage in the labour market (Sin, Tavares and Amaral 2016). ECAs include all voluntary activities beyond course curricula that 'make a contribution to students' personal capital' (Greenbank 2015, 187), such as volunteering, sporting, community and society-based activities. These require students to assign additional resources to their personal and professional development, often excluding students from lower socio-economic status given their lack of networks, and caring and work commitments (Bathmaker et al. 2016; Hordosy and Clark 2018). While Roulin and Bangerter (2013) found participation in ECAs was considered a way of distinguishing themselves from other graduate recruits, students were often ineffective in instrumentalising their involvement in such activities. Importantly, the universities' role in facilitating employability-related events is not always clear and there is often overlap between ECAs, co-curricular (those not a formal component of study but facilitated by the university) and embedded activities (Clegg, Stevenson and Willott 2010). A further avenue for enhancing positional advantage is gaining work experience, either embedded or extra-curricular (Jackson and Collings 2018). The following hypothesis was formulated:

H$_4$: Negative perceptions of the graduate labour market will be associated with greater efforts to develop positional advantage.

Career planning

Career planning involves setting goals and formulating strategies to achieve one's desired career (Gould 1979), forming part of the well-respected DOTS model of career competencies (Decision making, Opportunity Awareness, Transition Learning and Self-awareness) (Watts 1977). It is critical for effective job searching, achieving career satisfaction and obtaining employment (Shury 2017), particularly in challenging and changing work environments (see Seibert et al. 2013). While the nature of students' career plans in the context of new careers and industry 4.0 remains underexplored, there is concern with student engagement in career planning, evidenced by poor take-up of career development learning activities (Jackson and Edgar 2019). This questions whether students are aware of the shift from the organisational to self-managed careers and the required level of investment in their careers. Better understanding the determinants of students' career planning, particularly the

role of contemporary labour market demands, will help in formulating effective strategies to advance planning and career outcomes.

Drawing on social cognitive career theory, Lent (2013) highlighted the importance of career confidence, career control and agency in determining planning, yet noted the inhibiting role of 'resource limitations and financial pressures' and labour market conditions (7). Psychologically-based career theory emphasise the importance of individual expectations, motivations and involvement in determining career planning and control while sociologically-based theory assert opportunity is structured by external, controlling variables (see Millar and Shevlin 2007). A strong, internal locus of control and self-efficacy were deemed by Fugate et al. (2004) as important for identifying and realising work-related opportunities, enabling individuals to be less reliant on external factors and more prone to planning to manage uncertain situations. The following hypotheses were thus created:

H_5: Perceived employability will be positively associated with career planning.

H_6: A greater sense of career control will positively predict career planning.

H_7: Career proactivity will positively relate to greater career planning.

In relation to individual characteristics, Buddeberg-Fischer et al. (2003) found females were more purposeful in their career planning and there is some evidence that older students plan more (Gunkel et al. 2010), promoting the exploration of the role of individual characteristics. In addition to gender and age, we felt it important to also explore any effects for residency, socio-economic status, employment, along with study characteristics such as stage of study and discipline. Rather than a series of directional hypotheses, the following broad research question was posed:

RQ_1: HE students' engagement in career planning will vary by individual and study characteristics.

Method

Participants

Both undergraduate and postgraduate students (N=433) from two universities took part in the study by completing an online survey. Institution 1 was a smaller university based in Western Australia (N=307) and the other a research intensive university (part of the Russell group, N=126) based in England. Samples were drawn from both the UK and Australia given the similarity of their higher education systems (Webb et al. 2017). Participant

characteristics are summarised in Table 1. The sample broadly represents the universities' population with a proportionately more females, the majority aged less than 30 years, and one-quarter being international students. Students were at different stages of study and from a broad range of disciplines with proportionately more from Social Sciences. In relation to institutional differences, there were proportionately more males, mature-aged, domestic and undergraduate students in the Australian university.

[Insert Table 1]

Procedures

In the Australian university, the online survey details and electronic link were distributed to students via an announcement on their university's learning management system. Unit coordinators known to the researcher were asked to disseminate the survey to their students via email and were selected from each School to ensure a broad range of disciplines were represented. The UK university used social media as a platform for dissemination, mainly through career forum websites and via undergraduate and postgraduate intranet sites which were commonly used for advertising student participation in research projects. Data were collected between March and August 2018 and separate ethics approval was obtained from each university.

Measures

All items, other than background characteristics and participation in activities to develop positional advantage, were operationalised using five-point Likert agreement scales and are summarised in the Results section. Principal Components Analysis (PCA) was conducted to assess scale validity with all factor loadings exceeding 0.5 (Hair et al. 2010), and inter-item consistency of scales was gauged by Cronbach alpha, each exceeding the accepted threshold of 0.7 (Nunnaly 1978). Students first provided detail on their background characteristics (see Table 1). Socio-economic status was measured by parental occupation with data gathered for both parents and classified using established occupation codes in Australia (ABS 2013). Five items gauged student participation in activities frequently documented as enhancing positional advantage, namely sporting, society and community-based activities, volunteering and career-related events (for example, Clark et al. 2015; Kinash et al. 2016). Their reported Cronbach alpha was .80 and participation was gauged on a five-point scale (never, rarely, sometimes, often and very often). PCA confirmed developing positional advantage formed a single construct, explaining 55.678% of total variance and factor loadings ranging from .643 to .834. Regarding work experience, students were classified as either 'participating' or 'not participating' in more than 100 hours of academic credit-based

work experience and/or that gained outside university study (for example, paid work or extra-curricular internship).

Given the lack of empirical investigation of HE student understanding of contemporary labour demands, the six items capturing labour market perceptions were developed by the researchers. These related to the ease of securing desired employment, the casualisation of employment and underemployment (key discussion points for graduate employment outcomes). The survey was piloted with a number of students in both universities and, where necessary, items were revisited to clarify meaning. The items' computed Cronbach alpha was .75 and PCA confirmed a single construct, the factor explaining 45.214% of total variance and factor loadings ranging from .508 to .774. Three items measured perceived employability (Cronbach α=.71), adapted from Bernston and Marklund's (2007) scale. PCA confirmed a single construct, explaining 63.282% of the total variance and factor loadings ranging from .774 to .814.

Five items explored students' locus of career control (Cronbach α=.70), these were internally-focused, emphasising agency and initiative and informed by the 'internality' dimension of Millar and Shevlin's (2007) Career Locus of Control scale for school pupils. PCA confirmed a single construct, explaining 39.454% of total variance and factor loadings ranging from .534 to .761. Two sub-scales of the Australian version of the Career Development Inventory (CDI-A), 'career planning' and 'exploration' (see Rogers, Creed, and Glendon 2008), broadly informed the measures developed for career planning and proactivity in this study. Five items were developed, adapted from the 20 items used to measure career planning in the CDI-A, to gauge career planning (Cronbach α=.73), loading onto one factor with loadings ranging from .603 to .725 and 48.836% of total variance explained. Adapted from the CDI-A's 16 items used to measure exploration in the CDI-A, three items were used to gauge proactivity (Cronbach α=.81) and PCA confirmed it formed a single construct, explaining 72.707% of total variance and factor loadings ranging from .833 to .880.

Analysis

First, mean differences in students' labour market perceptions among the UK and Australia students were analysed with none reported. Mean differences were then explored for all other items and only a very small proportion reported significant differences by university (and therefore country). It was therefore deemed acceptable to combine the UK and Australian data for analysis. As the study relies on self-reported measures, the Harman's

single factor test (Podsakoff et al. 2003) was conducted to gauge common method variance. A general factor was not identified with a three-factor solution emerging, accounting for 77.306% of variance, and the one-factor solution not accounting for the majority of variance (34.840%). Common method bias was therefore not considered a significant concern in this study. Normality was examined for variables and measures of kurtosis and skewness were within 'normal limits', less than 10 and 5 respectively (Curran, West and Finch 1996).

Data were analysed using SPSS 24.0. First, descriptive techniques were used to gauge the mean and standard deviation of items relating to labour market perceptions, perceived employability, career control, career proactivity, developing positional advantage and career planning. Bivariate correlations gauged associations between variables and multiple regression was conducted to examine the posed research question and hypotheses. Dummy variables were created for the regression analysis, base variables indicated by (0) in Table 1. For highest parental occupation, Manager/Professional was coded one and all others zero. The working status variable was collapsed into relevant employment, non-relevant employment and unemployed and relevant employment was assigned the base variable. Institution was included as a predictor variable to highlight any influence particular to that university.

Results

Table 2 presents the mean and standard deviations for all items. These are briefly reviewed before analysing the relationship between labour market perceptions with the career constructs (hypotheses one to four), followed by the analysis for career planning (hypotheses five to seven and research question one).

[Insert Table 2]

Labour market perceptions and career behaviour

The first item for perceived state of the labour market was reverse coded so agreement with the six items represented negative perceptions of the labour market. Mean ratings (Table 2) indicated some uncertainty and concern among students on labour market health. Students appeared aware of challenges with underemployment and the narrow range of available job opportunities. Unease with casual and fixed-term working arrangements was apparent although not overwhelmingly so. Students clearly understood the level of competition in the job market, generating some anxiety among the cohort. Mean ratings for perceived employability suggest students, overall, lacked confidence in their positional advantage and likelihood of succeeding in the labour market.

A sense of control over their careers was clearly important to students and they appeared to have internalised the responsibility and importance of managing their own careers. While they placed significant value on directing their own careers, they were not yet confident in their ability to do so. Overall, career proactivity was prevalent in the student cohort. There was reasonably strong agreement among students that careers were important to them and that they were keen to get on the career ladder. There were somewhat surprising results for student participation in activities considered to enhance positional advantage. For all five forms of activities, student participation ranged between 'rarely' and 'sometimes' with sporting clubs/groups rated the least and career-related events the highest. For work experience, 44.1% of students undertook at least 100 hours as part of their studies and 48.3% completed 100 hours outside university.

Bivariate correlations for each of the examined constructs are presented in Table 3. Multiple linear regression was conducted to explore determinants of students' labour market perceptions. Multicollinearity was absent from the resulting model (see Table 4) with no inflated standard errors and the Variance Inflation Factor below the recommended threshold (Hair et al. 2010). Durbin-Watson test statistic of d=2.149 confirmed first-order linear auto-correlation was absent, being close to the critical value of 2 (Norusis 2012). The overall regression model was considered a reasonable fit for the data, F(16,324)=10.609, p<.000.

[Insert Tables 3 and 4]

Regression results indicate that institution was not a significant predictor, nor were discipline or stage of study. Those students who were unemployed or employed in a role not relevant to their targeted career reported significantly (approximating to α=.05) weaker labour market perceptions than those in relevant employment at the time of completing the survey. A strong association was reported for perceived employability with higher levels predicting more positive labour market perceptions, supporting hypothesis one. Similarly, those who scored more highly on career control were positively associated with favourable labour market perceptions, supporting hypothesis two. The third hypothesis was also confirmed, indicating that students' labour market perceptions were negatively associated with career proactivity. There were no reported differences in labour market perceptions for those embarking more in activities to enhance their positional advantage, as well as work experience; hypothesis four was therefore not supported.

While the bivariate correlations between predictor variables in the linear regression did not exceed .5, considered problematic for Type II errors (Grewal, Cote, and Baumgartner 2004), a positive relationship was reported between perceived employability and career control (r=.402), indicating greater confidence in one's positional advantage is related to a stronger sense of control over one's career. Interestingly, there was no significant correlation between proactive behaviours and perceived employability (where students who are more proactive in their careers would be more likely to perceive themselves more positively in the job market). There was, however, a positive association between proactivity and students' sense of career control (r=.223) which suggests the more goal-oriented and driven they are in their approach to careers, the greater their sense of control over their careers. Interestingly, there were no correlations between student participation in activities to enhance positional advantage and proactivity, career control or perceived employability respectively.

Determinants of career planning

Table 2 indicates that students are largely taking their careers seriously and are actively engaging in career planning. While their enthusiasm is evident, their relatively weak response for awareness of future career choices suggest they still need further counselling and guidance. The initial multiple regression model indicated a significant regression coefficient for 'labour market perceptions', despite its non-significant bivariate correlation with 'career planning'. Further investigation showed the high correlation between 'labour market perceptions' and 'perceived employability' caused dramatic changes in 'labour market perceptions' regression coefficient. The latter variable was removed from the analysis – causing very little change among remaining regression coefficients and model fit. Both multicollinearity and first-order linear auto-correlation were absent (d=1.994). The overall regression model was considered a good fit for the data, F(20,308)=13.150, p<.000.

[Insert Table 5]

Regression results are presented in Table 5. Institution was not a significant predictor, nor were individual characteristics, other than residency. Results indicated that international student status was positively associated with career planning. A significant, negative association was reported for undergraduates who were midway through their degree, compared with those in earlier stages. The stronger the students' perceived employability the higher their career planning scores, supporting hypothesis five. Further, and in support of hypothesis six, the more in control students feel with their career, the more they engage in career planning. Career proactivity was also a relatively strong positive predictor of career planning, supporting hypothesis six. Interestingly, engaging in

activities that enhanced positional advantage was not related to an individual's level of engagement in career planning.

Discussion and implications

Student concerns around the realities of the contemporary labour market were evidenced across both institutions (countries) and were not particular to certain disciplines. Aligned with Deloitte (2016, 2018), who found graduates desire more flexibility and career movement, they only seemed somewhat concerned with casual and contract working. In contrast, students appear to have internalised the reality of potentially being underemployed in the early stages of their careers and, consequently, are becoming overall more strategic and proactive in their career planning. Relevant employment engendered more positive perceptions on the range of opportunities available to students, the level of competition for graduate roles and the likelihood of underemployment upon graduation, affirming its value during university years (for example, Jackson & Collings 2017). This was more evident than less direct strategies such as developing positional advantages through participating in employability-related activities (societies, clubs, sport, volunteering, career-related events).

Career proactivity was evident among the students in this study and this tended to increase with less positive perceptions of the labour market. This suggests that despite greater awareness of labour market challenges, there is still widespread career propensity and therefore a certain resilience among the students. The widely documented declining employment conditions for new graduates (Pennington and Stanford 2019) do not appear to have compounded career apathy and passivism among HE students which, again, indicates a certain degree of psychological capital. That students have internalised the importance of the need to be more proactive in their career planning amid uncertain graduate labour markets is positive and, according to this study's findings, is predicted to lead to more planning and goal setting activities. The evidence also reveals here that students have internalised the responsibility for managing their careers, evidenced by their reasonable levels of career control. This indicates a potentially important interplay between students' potential career adaptability and sense of control, what Fugate et al (2004) refer to as 'internal locus of control'. This principally centres on a future employees' beliefs that they can control salient experiences relating to their career development, rather than these being outside of their control, and therefore being in a stronger positon to craft desired job market outcomes.

The study does point to some significant areas of concern, including relatively low levels of perceived employability among HE students which can worsen students' perceptions of the labour market. While this seemed to catalyse proactivity among students, in the sense of highlighting the importance of considering their career, it heightened feelings of not being able to self-manage it and cope with any setbacks they may encounter. This aligns with Kinnunen, Pisarik and Han (2011) who found perceived employability is positively associated with perceived capacity to cope with precarious working environment which demand flexibility and resilience, as well as confidence and self-efficacy. This emphasises the need for interventions and activities to enhance students' self-perceived employability, particularly given the rise in boundaryless and protean careers, turbulent contemporary working environments and the need for robust and confident graduates (Pennington and Stanford 2019).

As their sense of control declines with less favourable labour market conditions, ongoing efforts to enhance students' locus of career control are important. Understood as *psychological capital*, Tomlinson (2017) highlights the importance of students withstanding career shocks and periods of underemployment/unemployment and enabling more effective transition to different career settings. He suggests the significance of proactive coping strategies, self-efficacy and resilience, likened to Fugate and Kinicki's (2008) notion of dispositional employability, where an individual is better equipped to tolerate ambiguity and challenge at work with higher levels of self-esteem and optimism. With regard to fostering career planning, self-perceptions of employability were less important than career control and proactive behaviours. Developing strategies which enhance students' sense of career control is also, therefore, likely to make them more goal-oriented and further extend into the level of flexibility by which they plan ahead.

While it is clearly important for students to develop an accurate understanding of current labour market conditions and challenges, this must be carefully managed given the identified relationships with perceived employability, career control and career proactivity. Developing student understanding of labour market trends can be coupled with helping them to identify career pathways that capitalise on forecasted growth in certain sectors/industries and roles less vulnerable to automation. Helping students to understand environmental constraints and develop barrier coping mechanisms (Lent 2013, 2018) may also enhance resilience, deflect feelings of defeat from saturated labour markets and declining employment prospects, and make more informed rather than urgent, forced career decisions.

Surprisingly, the study found limited proactivity around undertaking activities which are widely acknowledged to enhance positional advantage. In addition to lower than expected participation in community, sporting, club and volunteering activities, less than half had undertaken 100 hours or more of work experience, within or outside their studies. Despite evidence of students' awareness of social congestion and the need to differentiate their profiles (Roulin and Bangerter 2013; Tymon 2013), this does not appear to be a significant part of their career building. Even among careerist students and those who conveyed greater career confidence, the application of activities strategized to enhance positional labour market advantages was not as prevalent as expected. This resonates with Thompson et al. (2013) who reported some consideration to the choice of ECAs yet a lack of career planning hindered students' participation in relevant activities. It is important to note that any lack of student engagement may be due to existing commitments and financial obligations which can inhibit involvement in additional developmental opportunities beyond degree studies, particularly among those of lower socio-economic status (Purcell et al. 2012).

Significantly, student perceptions of the labour market health did not influence their engagement with career planning, suggesting a disconnection between their realisation of prevalent challenges and how they should respond. Findings also support evidence of poor student engagement with career development learning activities (see, for example, Pegg et al. 2012; Bradley et al. 2019). The lack of variation in student responses by institution may be important, given the Australian university is 'newer' and more entrenched in the discourse of career development and employability. As the study is limited to only two institutions, generalisation should be treated with caution yet may suggest common patterns within contemporary student cohorts. Findings confirmed that international students were more engaged in career planning (see Jackson and Edgar 2019) and highlight the need to develop strategies to engage domestic students in active goal setting processes. That both perceived employability and career control positively predicted career planning highlights the importance of students establishing a strong sense of their own positional advantage and embracing career self-management. The challenge appears, however, to be translating this to actual engagement in the activities to achieve this (such as extra- and co-curricular activities and career-related events). The importance of goal setting is also illuminated, suggesting those that are proactive in this regard were more likely to position themselves more positively in the job market.

Practical implications

The study highlights practical implications to enhance students' career planning and sense of career control in a context of weak and uncertain graduate labour markets. First, HE institutions should actively build and leverage on students' awareness of underemployment and weaker employment outcomes to augment proactivity in career planning. Events which bring industry bodies, professional associations and local chambers of commerce to campus could enhance students' insight into relevant employment trends, complemented by practical strategies on how to approach and capitalise on labour market opportunities. The value of relevant employment for enlightening students on available opportunities and career pathways to achieving them affirms the importance of institutional efforts to enable students from all disciplines and backgrounds to access meaningful work opportunities related to their degree studies. This may be embedded into the curriculum through WIL or via co-curricular arrangements, such as centralised volunteering and internships arrangements.

To help students to better cope with and flourish in unstable labour markets, institutions must focus on augmenting their perceived employability. Artess, Hooley and Mellors-Bourne (2017), along with Kinash et al. (2016), provide a useful review of pathways for enhancing employability and highlight their value in building student confidence, including mentoring, award and programs, portfolios, and international exchanges. Jackson and Wilton (2017) highlighted the value of connecting students with industry via networking and teaching and learning activities, broadening their networks and building capabilities. There is clearly a demand for practitioners to prime students on the importance of managing resilience and adaptability as part of their future career planning. Findings also illuminated the need to develop psychological capital to empower students to better cope with multiple rejections often experienced during graduate recruitment and selection processes. Our findings further indicate the importance of building students' sense of career control in order to be able to navigate potentially multiple pathways; in short, finding ways of enhancing career confidence which is crucial in their emerging professional identity formation (Tomlinson and Jackson 2019).

Lent (2018) argues developing 'career-life preparedness' should encompass career choice counselling which encourages students to adopt 'a longer term focus on prospects for work instability or job/career change that are due to either personal choice (e.g., a desire for career renewal) or external presses (e.g., job loss owing to automation or outsourcing)' (210). Career counsellors should thus prepare students for the normality of career change and develop their understanding of occupation outlook projections (such as Frey and Osborne 2013).

Findings also illuminated the need to clearly articulate to students the importance of engaging in activities for positional advantage, including detail on their relative value and how different activities might streamline into students' career planning. As well as individual counselling, this may be achieved through online and on-campus discipline-level curriculum-based activities. Bradley et al. (2019) found that attendance at career-related events improved as students progressed in their studies, were more informed on event content and better appreciated the events' relevance, offering potential guidance on how to improve engagement in the sector. To better engage students, particularly domestic enrolees, in career planning, institutions need to reassure students that counselling and career-related information will not be too general (Shury 2017) and seek ways to embed career-related activities into the curriculum (Jorre de St Jorre and Oliver 2018). Encouraging students to consider their career goals early and formalising this into learning and assessment activities may help students better engage in career planning processes.

Conclusion

This study addresses the limited empirical analysis of students' perceptions of contemporary labour markets and has important implications for career development learning in HE. It found a broad realisation among students of the challenges of graduate labour markets, including the range of available opportunities and competition, particularly in securing graduate-level employment. Knowledge and perceptions of external conditions was associated with students' perceived employability, career control and their level of proactivity yet is not necessarily translating to more active engagement with career planning and activities to improve their positional advantage. Students still appear to be relying on formal credentials and not always embarking on profile building to help manage post-HE transitions This could perhaps explain evidenced apathy among HE students to participate in the increasing number of activities offered by centralised career provision and faculties wishing to enhance their students' employability and improve institutional employment outcomes amid difficult labour market conditions. Findings suggest domestic students, those who have lower levels of perceived employability, those who are passive in career goal setting, and may not be full grasping the importance and ability to self-manage their career would particularly benefit from intervention strategies to improve engagement in career planning.

The study is one of the first to report on students' career proactivity post-GFC context, adding validity to previous empirical work (Tomlinson 2007) and building on it by relating findings to career planning. The study has

provided original evidence to contemporize students' (and in this case, New Millennials') perceptions of the current world of work and its relationship to their proactivity and planning for their careers. The study also took place in a changing educational environment in both geographic contexts, namely strong market-led reforms, which has resulted in the transference of the costs of HE onto individuals graduates. Findings have raised significant implications for good career development practice and guidance within contemporary HE settings. Facilitating students' proactive engagement with career development, including findings ways of building their profiles and enhancing career resources – such as networking and resilience - is increasingly paramount in a higher risk labour market and more cost-driven HE environment. As with all studies, there are limitations. Self-reported data have raised concerns (Taylor 2014) yet were considered most appropriate for this particular study. The cross-sectional design meant causality could not be explained (Sok, Blomme and Tromp 2013) and the inclusion of an additional variable for previous labour market experiences may have been useful in both the regression and correlational analysis. Further, the established threshold limit of 100 hours of embedded and/or extra-curricular work experience, along with varying interpretation of its meaning (for example, the inclusion of work shadowing), may have influenced the regression results. Given student responses were uniform across the institutions, there appears to be some merit in generalising results yet it is important to acknowledge contextual differences in objective labour market characteristics may exist between the UK and Australian samples.

This study provides a solid foundation for future research. Broadening the study to other institutions in different settings would add value. Another direction would be exploring the relationship between perceived employability, career planning, proactivity and orientation to careers – for example, whether active students are more willing to adopt more flexible, portfolio careers. Further, the extensive suite of employability-related activities (spanning in-, extra- and co-curricular arrangements) are noted and the study could be extended to explore the influence of a broader range for gaining positional advantage.

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Table 1 Summary of participant characteristics

Variable	Sub-groups	Australian Institution		UK Institution		Total	
		N	Valid %	N	Valid %	N	Valid %
Gender	Male(0)	111	36.2	31	24.6	142	32.8
	Female	196	63.8	95	75.4	291	67.2
Age group (years)	0-20	62	20.2	26	20.6	88	20.3
	21-30	149	48.5	86	68.3	235	54.3
	31-40	60	19.5	8	6.3	68	15.7
	41+	36	11.7	6	4.8	42	9.7
Residency	Domestic(0)	247	80.5	90	71.4	337	77.8
	International	60	19.5	36	28.6	96	22.2
Stage of study	UG New(0)	78	25.7	17	13.5	95	22.1
	UG Mid	53	17.5	19	15.1	72	16.8
	UG Late	142	46.9	33	26.2	175	40.8
	PG Early	11	3.6	31	24.6	42	9.8
	PG late	19	6.3	26	20.6	45	10.5
Field of study	Arts and Humanities(0)	42	14.1	28	22.4	70	16.6
	Health and Social Care	33	11.1	21	16.8	54	12.8
	Social Sciences	144	48.5	31	24.8	175	41.5
	Science, Technology, Engineering, Maths (STEM)	78	26.3	45	36.0	123	29.1
Highest parental occupation	Manager	77	26.0	38	31.4	115	27.6
	Professional	117	39.5	57	47.1	174	41.7
	Manual/trade	52	17.6	13	10.7	65	15.6
	Community/personal service	22	7.4	6	5.0	28	6.7
	Clerical/administrative/sales	13	4.4	6	5.0	19	4.6
	Other	15	5.1	1	.8	16	3.8
Student working status	Full-time employed in role related to targeted career	29	9.4	22	17.5	51	11.8
	Full-time employed in role unrelated to targeted career	27	8.8	8	6.3	35	8.1
	Part-time employed in role related to targeted career	40	13.0	14	11.1	54	12.5
	Part-time employed in role unrelated to targeted career	115	37.5	29	23.0	144	33.3
	Not employed	96	31.3	53	42.1	149	34.4

Table 2 Mean and standard deviations (*N*=425)

	Mean	*SD*
Perceived state of the labour market		
I believe there is a good range of job opportunities for current graduates (R)	2.66	.984
The competition for jobs is a concern to me	4.06	.994
I feel that many graduates are likely to be employed in jobs below graduate level	3.59	.894
I feel that it is difficult for graduates to enter the jobs of their choice	3.81	.922
The uncertainty of casual and fixed-term work concerns me	3.69	1.058
I am quite anxious about the job market	3.76	1.046
Perceived employability		
I feel my skills and experiences will be sought after by future employers	3.82	.851
I believe that I will do well when competing with other graduates for jobs	3.51	.869
I feel confident to enter my targeted profession when I graduate	3.61	.993
Career control		
I feel I am in charge of my own career	3.89	.886
An individual employee is responsible for their career management	3.76	.865
I feel I will be able to manage setbacks in my career	3.65	.762
Freedom to choose my career path is important to me	4.27	.581
I am responsible for my success or failure in a career	4.09	.796
Career planning		
I often think about and plan for my future career	4.10	.867
I am aware of the future career choices I need to make	3.74	.899
I look to explore all the potential career options open to me	4.11	.709
I work on enhancing my employability a lot	4.00	.847
I am looking to develop my employability all that I can	4.27	.712
Proactivity		
Having a career is important to me	4.36	.723
I think strongly about my future career	4.22	.802
I am keen to get on the career ladder	4.06	.816
Developing positional advantage		
Participation in student societies or clubs	2.62	1.326
Participation in community groups or clubs	2.51	1.249
Participation in sporting groups or clubs	2.35	1.354
Participation in volunteering	2.76	1.230
Participation in career-related events (seminar, career fairs etc)	2.78	1.233

Table 3 Bivariate correlations (*N*=425)

Measure	1	2	3	4	5
1. State of labour market	1				
2. Perceived employability	-.441**	1			
3. Sense of career control	-.163**	.402**	1		
4. Proactivity	.281**	.087	.223**	1	
5. Positional advantage	.002	.043	-.047	.096	1
6. Career planning	.082	.317**	.444**	.543**	.097

*p < .05
**p < .01

Table 4 Regression analysis on labour market perceptions

	B	*SE*	β
Institution	-.034	.079	-.024
Health and Social Care	-.089	.108	-.047
Social Sciences	-.018	.085	-.013
STEM	-.124	.094	-.083
State of study – Undergraduate midway	.056	.101	.032
Stage of study – Undergraduate late	.107	.087	.080
Stage of study – Postgraduate early	.046	.128	.021
Stage of study – Postgraduate late	.227	.121	.108
Employed – not relevant to target career	.160	.081	.119*
Unemployed	.163	.084	.117* (*p*=.054)
Perceived employability	-.378	.049	-.409**
Career control	-.151	.065	-.120*
Proactivity	.283	.049	.277**
Positional advantage	-.004	.034	-.005
University-based work experience	-.018	.073	-.014
Non-university based work experience	.056	.067	.042
R^2	.344		
Adjusted R^2	.311		

*p < .05
**p < .01

Table 5 Regression analysis on career planning

	B	*SE*	β
Institution	.035	.061	.030
Gender	.080	.059	.066
Age	.003	.003	.048
Residency	.148	.069	.104*
Parental occupation - Manager/Professional	-.051	.054	-.041
Health and Social Care	.014	.085	.009
Social Sciences	.065	.069	.058
STEM	-.036	.083	-.029
State of study – Undergraduate midway	-.193	.080	-.130*
Stage of study – Undergraduate late	-.103	.069	-.092
Stage of study – Postgraduate early	-.176	.110	-.092
Stage of study – Postgraduate late	-.086	.102	-.047
Employed – not relevant to target career	-.031	.066	-.028
Unemployed	-.049	.069	-.041
Perceived employability	.116	.040	.148**
Career control	.311	.053	.291**
Proactivity	.396	.041	.443**
Positional advantage	.046	.027	.080
University-based work experience	.044	.057	.039
Non-university based work experience	-.018	.053	-.016
R^2	.461		
Adjusted R^2	.426		

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