WHO STRUGGLES MOST IN MAKING A CAREER CHOICE AND WHY? FINDINGS FROM A CROSS-SECTIONAL SURVEY OF HIGH-SCHOOL STUDENTS

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Abstract

This paper reports findings from an empirical study examining the influence of student background and educational experiences on the development of career choice capability. Secondary school students attending years 9-12 (N = 706) in New South Wales (NSW), Australia, were invited to participate in an online survey that sought to examine factors influencing their career choices. The survey included questions relating to student demographics, parental occupation, attitudes to school and to learning, student aspirations, and students' knowledge of the further education or skills required to achieve their desired goal. We found no significant differences in the proportions of students who were "uncertain" of their future career aspirations with respect to their socio-educational background. There were, however, significantly more students struggling with career decision making from an English-speaking background in comparison to households where children spoke a language other than English. Those students were proportionally present in government and non-government schools and had some behavioural and attitudinal characteristics in common.

Keywords: Youth Aspirations, Empirical Research, Career Education and Development, Post-school Transitions

Introduction

Five years after the Global Financial Crisis (GFC), high levels of youth unemployment in many developed countries remain the focus of intensive debate (Featherstone, 2013; The Economist, 2013). Off-shore transfer of low-skilled jobs to developing countries has contributed to this problem, forcing governments to pay closer attention to the educational attainment and career aspirations of young people (Tomlinson, 2012). Australia has not escaped this phenomenon, with the number of jobless young people reaching 40 per cent of 15-19 year olds in some regions (Mission Australia, 2010). Early school leavers and those with low academic achievements are the most affected (Dockery, 2010; Sikora & Saha, 2011).

Governments at both state and federal level have sought to address this issue through policies designed to raise student aspirations and to increase knowledge about post-school options. One such example is the National Partnership Agreement on Youth Attainment and Transitions (Department of Education Employment and Workplace Relations, 2011), which aims to increase educational

engagement and post-school transition to higher education, training and employment for 15-24 year olds (Keating, Savage, & Polesel, 2012). One of the objectives of the agreement is to achieve 90% Year 12 (or its equivalent) attainment nationally by 2015 (Council of Australian Governments, 2009) as a means to improve young people's capacity to enter the workforce or to engage in further education and training. In partnership, the New South Wales (NSW) government recently increased the age of compulsory education from 15 to 17 years old (Reid & Young, 2012). Young people are now required to remain in school until they complete Year 10, after which they must – until the age of 17 – either be:

1. in school, or registered for home schooling, or

2. in approved education or training (eg TAFE, traineeship, apprenticeship) or

3. in full-time, paid employment (average 25 hours/week) or

4. in a combination of work, education and/or training

While research clearly shows that low-attainers and early school leavers typically face poorer outcomes than students who successfully complete school and gain a qualification, quality of the educational experience has a greater positive impact on student aspirations and capacities than quantity of school years. Unfortunately, the schools that most need to provide their students with a quality education and diversity of experience are often the least equipped to do so (Reid & Young, 2012). Smaller schools in disadvantaged areas, especially those with a diverse student population and limited social capital, struggle the most (Reid & Young, 2012). Indeed, for some students, leaving school earlier to enter an apprenticeship can lead to better outcomes (Keating et al., 2012).

Research also indicates that young people from disadvantaged backgrounds do not necessarily lack aspirations. Rather, these students tend to lack a solid understanding of what they need to do and know to be able to achieve their goals (Saha & Sikora, 2008). It appears that many young people currently forced to stay at school until the age of 17 would prefer to be working, however, the evaporation of demand for unskilled labour has significantly reduced availability of the types of jobs many of these young people would like to do (Meijers & Te Riele, 2004). Without significant change in what students are learning and how well they learn it, all such policies may do is prevent disaffected young people from putting upward pressure on the official unemployment rate.

Diversionary policies can have other diversionary effects, leaving important questions such as "why do some young people have difficulty adapting to changes in the current labour market and in taking advantage of educational opportunities", unanswered. Policy discourse often sweeps such complexities away but, in doing so, glosses over the contribution that has been made by the education

that these young people have received. This is evident in the way in which the New South Wales Department of Education and Communities (DEC) conceptualizes the problem in their statement on youth attainment and transitions:

> "Studies here and overseas have found that teenagers who leave school early are two and a half times more likely to be unemployed, earn lower wages and have poorer health. And every year in Australia around 50,000 young people aged from 15 to 19 drop out of education and training and are unemployed. There was a time - and not that long ago, too - when a teenager could finish school at 15 and walk straight into a job or start a trade. But the times have changed. Technology has changed the nature of work and 21st century teenagers now compete for jobs and study opportunities in a globalised environment, against other young people in other countries. But the more things change, the more opportunities open up. A better education, more training and work experience means more choices for life after school" (McGaw, 2005).

In the above excerpt, both education and social background are left unproblematised: education is accepted as universally 'good', while social background is not raised at all. Yet we know that the effects of 'dropping out' are different for different student groups, with those from advantaged backgrounds more able to access post-school opportunities through more extensive social networks. We also know that educational experiences differ between student groups and that this is bi-directional in nature. For example, individual student characteristics – such as gender, culture, geographic location and so on – can influence students' interpretation of and relationship to the curriculum, as can the content of the curriculum and the ways in which it is taught, by whom and how well (Anyon, 1981; Michael W. Apple, 1972; M.W. Apple, 2004). A question that remains therefore is this: Are students who experience difficulty accessing the academic curriculum (school knowledge) more likely to struggle with their future career determination, or are those who experience difficulty envisioning a future career less likely to see the point of school knowledge? To better understand factors influencing career choice decisiveness, we investigate which students report the most difficulty in career determination. We will discuss this group of students in relation to some environmental, social and personal factors influencing them.

Method
Sample plan

The target population of our cross-sectional survey was secondary school students attending Years 9 to 12 in New South Wales. In 2011 there were nearly 159,000 students studying in Year 9-12 (including full-time and part-time students) in NSW (Australian Bureau of Statistics, 2010). Following the recommendations of Krejcie and Morgan (1970), we required a sample size of not less than 384 respondents to reach a 95% confidence level with a 5% margin of error. However, as previous international research findings in the area of career choices counted non-response rates of up to 30% (Sikora & Saha, 2009), we prepared to oversample by 30% to ensure validity and reliability of the collected data. Thus, we were aiming for a minimum of 500 respondents to complete the survey.

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Participants

Participating schools were selected using stratified simple random sampling. New South Wales (NSW) is Australia's largest state comprising one third of the national population. In 2011, there were 1,128,317 school-aged students, 34% of whom attended non-government schools (Burbules, Lord, & Sherman, 1982). The government school sector educates 66% of the K-12 schooling population with over 2200 schools and 744,392 students (Burbules et al., 1982). In an effort to represent this split between government and non-government enrolment, we invited 8 government schools and 4 non-government schools from both urban and rural areas of NSW to participate in the study.

To ensure participation of students of different socioeconomic backgrounds, we drew on the Index of Community Socio-Educational Advantage (ICSEA), developed by the Australian Curriculum Assessment and Reporting Authority (2012). Each school in Australia has an ICSEA value on a scale ranging from 500 "extremely educationally disadvantaged backgrounds" to about 1300 "very educationally advantaged backgrounds". The scale has a mean of 1000 and a standard deviation of 100 (Australian Curriculum Assessment and Reporting Authority, 2012) with the majority of Australian schools in the 801-900, 901-1000, 1001-1100 and 1101-1200 bands. Potential schools with ICSEA values within these bands were invited to participate (see Table 1 below).

Our final sample included 706 students in Years 9-12 from 12 schools: six schools were within +/- one standard deviation of the mean (three schools just below and three schools just above) and six were within +/- two standard deviations (two schools below and four schools above) of the mean (see Table 1 below). The students responded to the survey in the period from October 2012 to December 2012 (Term 4 out of 4 school terms). The sample was representative of enrolment share between the government and non-government sectors with 65.3% of respondents from government schools and 34.7% of participants from non-government schools. Two of the government schools were academically selective (students are admitted to these schools based on academic merit), comprising 28.6% of respondents. All four non-government schools were single sex (13.7% from boys' schools and 21% from girls' schools). The remaining schools were co-educational (see Table 1).

The majority of the respondents were 15, 16 or 17 years old (26.6%, 28% and 25.5% respectively), 11.2% were younger than 15 years old, 7.6% were 18 and the remaining 1% of students were 19 or older. Of all respondents, 22.2% were in Year 9, 31.2% were in Year 10, 14.2% were in Year 11, 29.3% were in Year 12, and 3.1% had just completed Year 12 at time of participation. The majority of the respondents were female (64.4%), were born in Australia (81%), and had at least one parent born outside Australia (43.3% had both parents born overseas and 17.6% had one parent born overseas). The most popular language spoken in the respondents' homes was English, with 59.1% reporting speaking English only and 26.8% speaking English and other language(s).

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Table 1. Percentage of participants completing the survey by type of school.

ICSEA Value	School Code	School Sector	Selective/Non-selective	Single sex/ Co-educational	% of participants
1101-1200 (Median+2 Std.Dev.)	School 12	Non-government	Non-selective	Single sex	43.59
	School 11	Government	Selective	Co-educational	
	School 10	Non-government	Non-selective	Single sex	
	School 9	Government	Selective	Co-educational	
1001-1100 (Median+1 Std.Dev.)	School 8	Non-government	Non-selective	Single sex	25.64
	School 7	Non-government	Non-selective	Single sex	
	School 6	Government	Non-selective	Co-educational	
Mean = 1000					
901-1000 (Median-1 Std.Dev.)	School 5	Government	Non-selective	Co-educational	20.8
	School 4	Government	Non-selective	Co-educational	
	School 3	Government	Non-selective	Co-educational	
800-900 (Median-2 Std.Dev.)	School 2	Government	Non-selective	Co-educational	9.97
	School 1	Government	Non-selective	Co-educational	

Instrument

The online survey contained an information cover sheet, 29 main questions and 37 skip/"display logic" questions that were displayed (or not) to students depending on their previous response (including attitudinal, behavioural, factual and demographic items) and closing instructions. A variety of scales such as nominal, interval and ratio were used. In addition, some open-ended response formats were added. Variety in the response scales and creativity of visual illustrations (when appropriate) increased the overall quality of the survey instrument, making it more interesting and engaging for participants (Burns & Bush, 2010), with the intention of positively affecting the participation rate and reducing drop-outs.

Procedure

Following ethics approval by the sponsoring university and approval to conduct research in NSW government schools from the NSW Department of Education and Communities, principals of 34 schools within the chosen strata were contacted.i Consenting principals arranged for their career

advisers to liaise with the research team and to pass on information about the study to students and their parents or guardians. Students and their families received written information about the survey via school letters and emails. They were free not to participate in the study and parents could withdraw their child/children from participation at any point.

Data analyses

The survey was conducted online using Qualtrics software. Data were exported into IBM SPSS Statistics 19 software for further statistical analysis. Responses to open-ended questions were coded categorically. For example, the Australian Bureau of Statistics' occupational categories (Bowles & Gintis, 1976) were used to code parent occupations. In order to analyse characteristics associated with career choice indecisiveness, we grouped generic responses to the question "What would you like to do when you finish school", such as "Not sure", "Nothing", "Travel", "GAP Year", "YOLO" (You Only Live Once) or no answer. This group was categorized as "career uncertain". We then conducted detailed analysis of the survey results using descriptive statistics, chi-squares, and independent samples t-tests. Variables which had a significant relationship with career uncertainty in the bivariate chi-square and t-test analyses were subsequently entered as predictors into a binary logistic regression with career certainty (certain vs. uncertain) as the outcome variable.

Results

From the total 706 participants, 582 expressed a clear intention regarding their post-school career plans and 70 were grouped in the "career uncertain" cluster. The relationship between the "career certain"/ "career uncertain" grouping and students' own articulation of certainty in career decision making was examined using independent samples t tests comparing participant responses on the question "How much certainty do you have in choosing your future career? Please indicate on a sliding bar… (0% - 100%)" for those who were in "career certain" and "career uncertain" groups. Students in the latter group had significantly lower certainty in their career choice (M = 43.42%, SD = 31.32) compared with those who had made a decision about what they would like to do after finishing school (M = 64.68%, SD = 29.27), $t(633) = 5.03$, $p < .001$, $d = 0.70$.

Demographics

School type/sector

Being from a particular school was significantly related to students' career certainty, $\chi^2(11) = 31.78$, p = .001, with students from schools located further away from the city being more likely to be in "career uncertain" group (See Table 2).

Table 2. Percentage of "career certain" and "career uncertain" students per school.

School Code	Geographic location	"Career Certain" students, %	"Career Uncertain" students, %
School 6	Outer metro area	76.3	23.7
School 10	Regional	76.5	23.5
School 5	Outer metro area	80	20
School 7	Outer metro area	82.7	17.3
School 4	Outer metro area	85.7	14.3
School 2	Outer metro area	87.9	12.1
School 3	Metropolitan	92.9	7.1
School 9	Metropolitan	93	7
School 1	Metropolitan	93.3	6.7
School 11	Metropolitan	95	5
School 8	Metropolitan	95.6	4.4
School 12	Metropolitan	95.9	4.1

The relationship between career certainty and school type was examined with a series of chi square analyses. Being in a selective school was significantly related to career certainty, $\chi^2(1) = 6.32$, p = .012, with 94.1% of students in selective schools being "career certain" in comparison with 87.3% in non-selective schools.

No significant relationship was found between career certainty and school sector (i.e. government or non-government, single-sex or co-educational) or socio-educational dis/advantage (as measured by ICSEA scores), (all p's > 0.05).

Characteristics of participants

Relationships between career certainty and participant characteristics were examined with a series of chi square analyses. Location of birth was significantly related to (un)certainty in career decision making, $\chi^2(1) = 6.62$, p = .010, with persons born in Australia being more likely to be in the "career

uncertain" group (12.2% of Australian born), in comparison with the percentage of "career uncertain" among students born overseas (4.2%). Parents' place of birth was also significantly associated with students' (un)certainty in career decision making, $\chi^2(3) = 8.36$, $p = .039$, with 14.4% of students having both parents born in Australian, 12.3% of students having one parent born in Australian and only 7.1% of students having both parents born overseas being in "career uncertain" group. There was a significant relationship between language spoken at home and career indecisiveness, $\chi^2(2) = 13.18$, $p = .001$. The largest percentage of students who had not decided what they were going to do after they finished school was from families where they spoke only English at home (14.1%). In the families with language other than English being spoken at home, 9.2% were not ready to make a decision about what to do after finishing school. The smallest percentage (4%) was in the families where children spoke at home both English and other language. Gender, age of students, year grouping and parents' occupations were not significantly associated with career (un)certainty; all p's > .05.

The relationship between career certainty and whether students had done paid part-time work was not statistically significant, $p = .753$. Nearly half of those who did part-time work said it influenced their ideas about their future career, but the comments were mostly negative (i.e. 17 year old girl, School 7: "Showed me what I don't want to do for a living").

Attitudes towards school

The relationship between students' career decision certainty and liking school was examined using independent samples t tests comparing answers on the question "Do you like school?" (on a 5-step like-to-dislike scale) for those who were in "career certain" and "career uncertain groups". Those who were in the "uncertain" group liked school significantly less ($M = 2.43$, $SD = 1.16$) than those who were "certain" about their career choice ($M = 1.86$ years, $SD = 0.974$), $t(650) = -4.506$, $p < .001$, $d = 0.53$.

The relationship between the helpfulness of school subjects in career determination and career certainty was examined with a chi square analysis. The result $\chi^2(2) = 13.50$, $p = .001$, showed that there is a significant association between being "career uncertain" and not considering any school subjects as being helpful for their future career. Only 66% of "career uncertain" students considered schools subjects as being helpful in comparison with 84.5% of "career certain" students.

Among those who did consider some school subjects as being helpful for their future career, higher percentages of "career uncertain" students named Personal Development, Health and Physical Education (PDHPE), Creative Arts, and Vocational Education and Training (VET) as being helpful for their future career. Conversely, larger percentages of "career certain" students named English, Mathematics, Science, Human Society and Its Environment (HSIE), and Technology and Languages as being helpful (see Figure 1).

Figure 1. Percentage of students in each of the career "certain" and "uncertain" groups who nominated each subject as being helpful for their future careers.
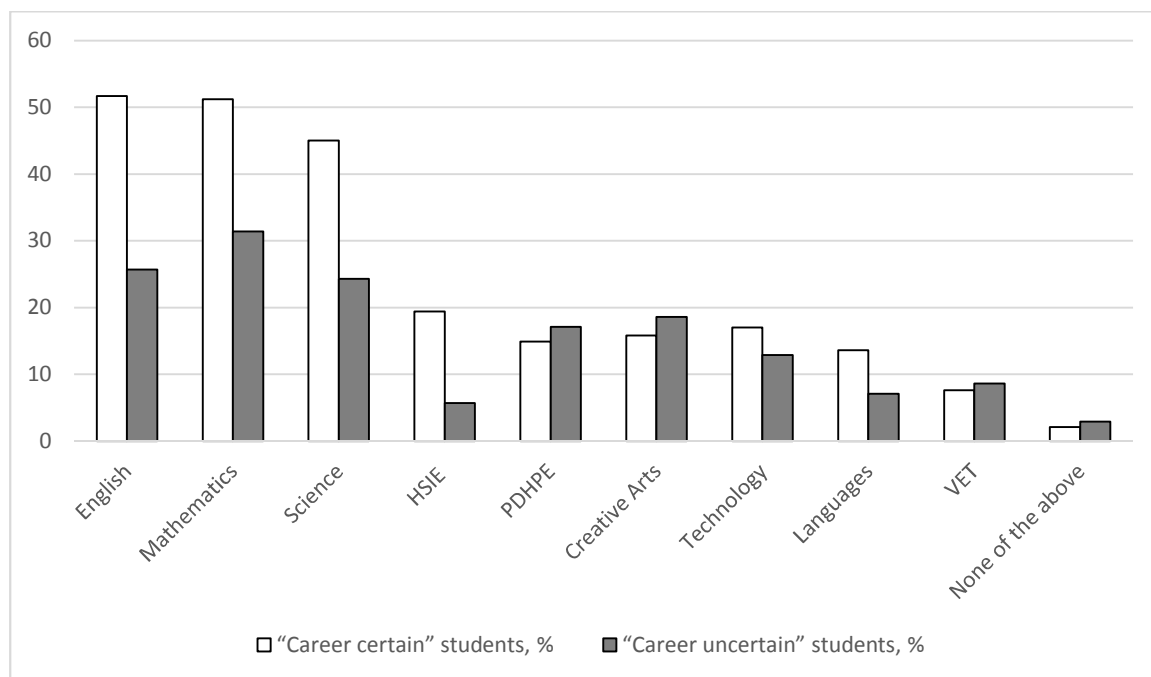
NB: percentages do not add to 100 as students could select more than one school subject.

Self-evaluation

The relationship between students' beliefs regarding their academic achievements and whether they had decided what to do after finishing school was analysed using a chi square analysis comparing participants' ranking of themselves as being in the top, middle or bottom of the year/grade for those who were in "career certain" and "career uncertain" groups. Being "career uncertain" was significantly related to self-evaluation of academic achievement in comparison with other students $\chi^2(2) = 11.92$, $p = .003$. Only 7.1% of students who ranked themselves in the top third of achievers in their year group were not certain as to what they want to do when they finish school, compared with 12.9% of those who ranked themselves as being in the middle of their year group academically. The highest proportion of career uncertain students (23.1%) was among those who ranked themselves as being at the bottom of their year academically.

The relationship between self-assessment of their own problem solving skills and career certainty was examined using independent samples t tests. After comparing levels of agreement with the statement "I usually can solve difficult problems if I make enough effort" on a 6-step agreement scale for those who were in the "career certain" and "career uncertain" groups, it was found that those who were among the "career uncertain" were significantly less likely to agree with the statement ($M = 4.50$

years, SD = 1.21) compared with those who were in the "career certain" group (M = 5.02 years, SD = 1.12), $t(650)$ = 3.66, $p < .001$, d = 0.45.

We then compared levels of agreement with the statement "I can usually think about several possible solutions when dealing with problems" on a 6-step agreement scale for those who were in "career certain" and "career uncertain" groups, and found that students who were "career uncertain" were significantly less likely to agree (M = 4.24 years, SD = 1.33) than those who were in the "career certain" group (M = 4.74 years, SD = 1.17), $t(650)$ = 3.30, p = .001, d = 0.40.

The relationship between self-assessment of goal orientation skills and career certainty was examined using an independent samples t test, comparing levels of agreement with the statement "Usually it's easy for me to follow my goals and work towards achieving them" on a 6-step agreement scale for those who were "career certain" and "career uncertain". Students in the "career uncertain" group were significantly less likely to agree with the statement (M = 4.21 years, SD = 1.28) compared with those who were in the "career certain" group (M = 4.56 years, SD = 1.15), $t(650)$ = 2.37, p = .018, d = 0.29.

Logistic Regression

Variables which had a significant bivariate relationship with career certainty were entered as predictors into a binary logistic regression with career certainty as the outcome variable. Predictors entered included school location (metropolitan, outer metropolitan or regional), school type (selective vs. non-selective), student's grade in school, country of student's birth (Australia vs. elsewhere), country of parents' birth (both parents born in Australia, one parent born in Australia, neither parent born in Australia), language spoken at home (English only, English plus another language, other language/s only), whether the student likes school, the perceived helpfulness of school subjects (yes, no, not sure), self-assessment of their academic achievements (top, middle, or bottom third of their year), self-assessment of their ability to solve difficult problems, self-assessment of their ability to think about several possible solutions and self-assessment of goal orientation skills. Categorical predictors have their categories noted in brackets; all other predictors were treated as continuous.

As only five students listed that they were unsure of the location of their parents' birth, these students were excluded from the analysis. The remaining sample of students who gave complete answers to each of the questions addressed here was 629 students. Table 6 gives a summary of the variables predicting to career certainty.

Table 3. Summary of Logistic Regression Analysis for Variables Predicting Career Uncertainty.

Predictor	B	S.E. B	e^B
School location:			
Metropolitan vs outer metropolitan	0.65	0.42	1.91
Metropolitan vs regional	1.17*	0.55	3.22
School type	-0.06	0.50	0.94
Grade in school	-0.11	0.14	0.90
Country of child's birth	-0.69	0.57	0.50
Country of parents' birth:			
Both born in Australia vs one born in Australia	0.36	0.43	1.43
Both born in Australia vs neither born in Australia	0.63	0.50	1.88
Language spoken at home:			
English only vs no English	-0.17	0.59	0.85
English only vs English plus another language	-1.39*	0.59	0.25
Extent of liking school	0.27	0.16	1.31
Perceived helpfulness of school subjects:			
Yes vs no	0.32	0.57	1.38
Yes vs not sure	1.08**	0.40	2.94
Self-assessment of academic achievements:			
Top third vs middle third	0.79*	0.36	2.21
Top third vs bottom third	1.02	0.59	2.77
Self-assessment of problem solving capacity	-0.14	0.19	0.87
Self-assessment of ability to think about solutions	-0.07	0.18	0.87
Self-assessment of goal orientation skills	-0.02	0.16	0.98
Constant	-0.94	1.86	0.39
χ^2	54.927		
df	17		

Note: e^B = exponentiated B.

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

As seen in Table 3, after entering all variables into the model, school location, the language spoken at home, the perceived helpfulness of school subjects and students' self-assessment of academic

achievement remained significant. For school location, the significant effect was for metropolitan versus regional locations, such that the odds of being in the career undecided category were higher for children from regional locations than for children from metropolitan locations. For the language spoken at home, the significant effect was for English only versus English plus another language, such that the odds of being in the career undecided category were higher for children who spoke English only at home than for students who spoke English plus another language at home. For the perceived helpfulness of school subjects, the significant effect was for those who thought subjects were helpful versus those who weren't sure, such that the odds of being in the career undecided category were higher for students who weren't sure whether school subjects were helpful than for students who more decisively agreed that subjects were helpful. Finally, for self-assessment of academic achievement, the significant effect was for those who perceived themselves as being in the top third versus the middle third, such that the odds of being in the career undecided category were higher for students who perceived themselves as being in the middle third than for those who perceived themselves as being in the top third. There were no other significant differences.

Discussion

The goal of this study was to improve understanding of the underlying reasons behind career choice indecisiveness with a focus on high school students attending government and non-government schools in different socioeconomic and geographic areas of NSW. The findings provided some insights into "career uncertain" students' attitudes towards schooling in their respective educational sectors, their socio-demographic background and self-evaluation related to career decision-making. Results showed that "career uncertain" students were more likely to be from regional, non-selective schools, being born in Australia from Australian parents, with English as their only home language. They tended to dislike school and not find school subjects to be helpful for their future careers to a greater extent than "career certain" students. In addition, in relation to their self-assessment, "career uncertain" students ranked themselves lower in their academic achievements, problem solving and goal oriented abilities. While all these findings were statistically significant in bivariate relationships with career (un)certainty, only four variables remained statistically significant following the binary logistic regression analysis. Those variables were (i) school location, (ii) students' home language, (iii) perceived helpfulness of school subjects, and (iv) self-assessment of academic achievements.

School location

While the results of the survey indicated that students in regional schools were significantly more likely to be "career uncertain", we have to treat this finding with caution due to the fact that there was only one regional school in our sample (the remaining schools were metropolitan or located in outer

metropolitan areas). As such, this result cannot provide meaningful inferences to the general population, as identified significance may not be influenced solely by regionality, but may also be influenced by other factors, such as distance from major employment centres or other factors unique to that region.

The remaining three significant predictors (home language, perceived helpfulness of school subjects and self-assessment of academic achievements) are interrelated and may have a commonality in association with the students' educational experiences. We turn now to a discussion of each of these predictors in turn, highlighting the ties to cultural background.

Home language

Firstly, the factor of the home language can be described in terms of cultural background, which has strong influence not only on career decision-making but also on attitudes towards studying, academic performance and self-evaluation as learners. Noble and Watkins (2009) in their analysis of the relation of ethnicity and disposition to academic achievement found that various socio-cultural groups have different approaches to learning. They argue that different cultures encourage certain home and school practices, such as self-discipline and stillness, which can foster academic achievement and goal-orientation. In particular, Watkins and Noble (2008) found that Chinese students were required to do more academic work outside the school and were more physically disciplined or "still" during class, in comparison with Anglo and Pacifica children (the other two ethnic groups in the research project). Knowing this, we decided to look more specifically at the kinds of languages students spoke at home in our sample, and separated them into English, European, Asian, Pacific and Middle Eastern. Looking at the relationships between students' career (un)certainty and their language groups using cross tabulation and chi-square, we found a significantly larger proportion of "career uncertain" students among the European language group (26.3%), followed by English-only (14.2%), Asian (5.1%), Pacific (4.8%) and Middle Eastern (1.6%), $\chi^2(5) = 21.34$, $p = .001$. Students from various home language groups had also statistically significant differences in the ranking of their own academic achievements , $\chi^2(10) = 52.82$, $p < .001$, with 53.5% of students of Asian home language group identifying themselves as being in the top third of the year, followed by English (50.3%), Pacific (33.3%), European (30%) and Middle Eastern (24.2%). Following Watkins and Noble (2008) in their suggestion to focus on educational practices encouraged by different ethnic groups (rather than ethnic groups as the main determinant), it is important that future research further investigates the kinds of career related educational experiences that students of various cultural backgrounds have at home and school.

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Perceived helpfulness of the school subjects for future career

The second statistically significant finding, that indicating a relationship between career uncertainty and not finding school subjects helpful, brings us to the question stated at the beginning of this paper: Are those who struggle to access relevant academic curricula more likely to experience difficulties in career determination, or are students who have trouble envisioning their future career more likely to not see school subjects as helpful? Recent Australian Government initiatives such as National Partnership Agreement on Youth Attainment and Transitions (Department of Education Employment and Workplace Relations, 2011), mentioned earlier in this paper, encourage school students to stay longer at school due to some research findings arguing for a positive association between number of years of studying and employability. However, at the same time schools identify rising difficulties in catering for increasing numbers of unaffected students without alternative choices (Granite & Graham, 2012; Slee, 2011). Lamb and colleagues (2001) argue that in order to raise school completion rates and minimise dropout, it is important to build institutional arrangements and programs that are able to cater for a diverse range of talents and backgrounds. However, due to a number of schools not being able to provide a range of career choice associated experiences and subjects, not all students benefit from the current policies in the same way (Reid & Young, 2012). Instead of using an individual deficit model and forcing students from disadvantaged backgrounds to receive increased number of years of schooling, policy makers should focus on educational quality and relevance of educational experiences across all demographic groups. As noted earlier, it is therefore vital that future research further investigates the kinds of career related experiences and school subjects "career uncertain" students have access to as well, as their level of satisfaction with the available choices.

Self-assessment of academic achievements

The final statistically significant finding of this study identified that "career uncertain" students ranked their academic abilities lower than did their peers. There might be various reasons for lower academic performance self-assessment and, as research shows, these personal reflections might not necessarily represent a full picture of the actual abilities of the individuals. According to Correll (2001) "widely shared cultural beliefs attached to various tasks" not only affect self-evaluation in occupationally relevant activities, but also "how individuals are channeled into particular activities and subsequent career trajectories by others" (p. 1725). In her longitudinal study following young people from Year 8 to two years post-school completion, Correll (2001) found that certain groups of students assess their academic achievements lower than others regardless of their actual performance.

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This happens due to certain societal expectations and cultural beliefs relevant to the student groups identified in her research.

While acknowledging the crucial role of family in the process of socialisation, Basil Bernstein (1977) paid particularly close attention to the role of education and curriculum. In Bernstein's view, educational systems have a power of distribution of what can be counted as valid knowledge, its transmission and evaluation. He suggested that formal educational knowledge is transmitted through the three "message systems" of curriculum, pedagogy and evaluation (or assessment). According to Bernstein (1977),

> "[c]urriculum defines what counts as valid knowledge, pedagogy defines what counts as a valid transmission of knowledge, and evaluation defines what counts as a valid realization of this knowledge on the part of the taught" (p. 85).

Applying this concept to the issue of "career uncertain" students, it is important to have a better understanding of (i) what kind of career education experiences students struggling with the career choice receive; (ii) in which way they obtain information relevant to their career decision-making; and (iii) what kind of feedback (formal and informal) they are exposed to.

To summarize, we argue that while statistically significant findings of our survey identified certain socio-cultural characteristics and attitudes related to school subjects and own performance of "career uncertain" students, further investigation is essential. We strongly recommend to further research into the kinds of educational home and school practices (including curriculum, pedagogy and evaluation), as well as quality and relevance of those educational experiences to students career decision making.

Limitations

There are a number of limitations which we would like to acknowledge. First, the study was conducted only with students from one state of Australia (NSW), and it should be replicated in other states of Australia and in other countries. Second, students attending Catholic systemic schools, while representing 18.2% of the NSW school education sector, were not present in our data set. In an attempt to address this issue two Catholic non-systemic schools were included in the sample, however, it has to be acknowledged that the opinions of the students in those schools may vary from those in Catholic systemic schools. Third, the participants of the survey were self-selected. It is possible that students who were most struggling with career determination might consider that participation in a "Career choice" survey is not for them and choose not to participate. Fourth, online questionnaires, while being a very time-saving and flexible tool for researchers, might not be the best option for all participants. This may be partly because some students might have limited access to the Internet and digital devices such as computers and smart phones; and partly, because for some

students, due to different levels of academic achievement, oral responses could have been preferred. Finally, the data of the survey was self-reported by students, which unavoidably brought a certain level of subjectivity. In order to maximize the authenticity of responses, we ensured anonymity and confidentiality of all information being provided.

Conclusion

Young people currently face a number of challenges in their transition from school to work, study or training. While both financial and labour markets are going through radical transformations, there is little evidence confirming that educational systems are successfully adapting to these challenges. Therefore, high numbers of young people who might hope to find support in determining their future careers from guidance provided at their schools seem to struggle with drawing connections between school subjects and real world careers. This kind of struggle, in a certain way, is a tightening of the trap for those already in it, as those students who do not proactively consider their future careers tend to value school subjects to a lower degree than those who do consider their future careers, and that might explain their lower standards of academic achievement. Consequently, as highlighted by previous research, low academic achievers and early school leavers are more likely to experience difficulties in their post-school transitions. We argue that future interventions that are aimed at transforming students' perspectives on the value of school and further education as a means to achieve a "good life" are unlikely to be successful without transforming judgments of young people as to how education can be useful for the achievement of the relevant outcomes (i.e. future career). In order to make these interventions more successful, we first of all have to better understand what kind of career choice related educational experiences are accessed by "career uncertain" young people, the comparative quality of those experiences and their relevance to different student groups.

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[i] Approval to conduct research in independent non-government schools is determined by individual school principals.