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**Are young people making subject choice decisions too early?
An Analysis of the perceived implications of choosing subjects
and careers at age 16 in England.**

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Introduction

This report is about analysing the way students make decisions about what courses to take after they are 16 and explore the perceived implications of these choices on their future education and career. This issue is important because now in the UK everyone must stay in some form of education or training until age 18. The choices they make at age 16 play a huge role in determining what students can and cannot do and ultimately what career path they will take. With the new retirement age rising to 67 by 2028 it is vital students eventually end up in a role that maximises their skills for both their wellbeing and their employer's productivity. This report will analyse data collected from a survey completed by 18-49 year olds on their thoughts and influences of their selection of courses and how they believe this has determined their later education and employment.

Background

Currently in England until the age of 14 all students (in local authority schools) follow the same national curriculum. At 14 pupils gain a limited freedom by having the choice to drop, continue or start studying new subjects however must remain on a curriculum with core subjects compulsory such as English and Mathematics. This is known as key stage 4 and during this pupils sit GCSE exams. Then at 16 the national curriculum ends and students get to entirely pick what courses they do. Usually this is in the form of several subject specific A-level qualifications but can also be apprenticeships, an English baccalaureate or training in employment.

The research is in the field of youth studies and is of relevance to the theory of individualisation in sociology. This is the idea the individuals life is becoming a more self-steered phenomenon being less restricted in collectively by social classes and norms (Beck 2000). The research can indicate if whether it is perceived beneficial for young people to given these choices at this fairly young age. Figures state '30 percent of university applicants in the UK wish they would have chosen different A-level subjects (Which? Press Office 2016). This already shows there is a significant problem for many at the current way students pick at 16, this could be because they are too young to make such a decision.

Young people making their career decisions too early is a popular thought. Many headlines echo this with a few examples being 'Young people are having to take career decisions too early' (Lane, 2013) in the Guardian and 'Students shouldn't be forced to narrow their options so early' (Climer 2016) in the telegraph. Many claim England should change their secondary education system further towards a baccalaureate system like is used in France which allows pupils to study a greater range of subjects through to the age of 18. The purpose of this is too give all students a broad understanding in many areas and not narrow down their career options too soon.

There have been shown to be many factors effecting a student's course choice (both at 14 and 16 years old) unrelated to whether these courses will specifically a good fit for them (Jin, Muriel et al. 2011). Firstly for example their report states that the huge growth in vocational courses at GCSE level may have been driven by schools performing poorly in the 5 A* to C measure (this is a common way of judging overall pupil performance in secondary school). These schools then switch to providing more vocational courses in order to perform higher in this measure and therefor rise in league tables. This impacts and limits young people's course choices in a way that's irrelevant to whether it's effective personally for them or not. Those schools that have changed courses most rapidly have made the quickest gains in the rate of pupils achieving 5 A* to C grades.

Secondly the report shows pupils are heavily influenced on the way course decisions are presented to them by what is known as framing effects. For example pupils tend to stick with default options when they are given. Finally at age 16 there is a huge array of options- many subjects to pick from. This would seem to be useful as students could have the potential to choose courses fitting closer to their wants but in fact it's suggested that instead of selecting rationally students can be influenced by emotional bias and social norms with gender differences shown to be still existing even when the effect of prior attainment and subject preferences are controlled. The attitude that Science related subjects are more masculine and arts and language subjects are more feminine still exists (Whitehead 1996). This is despite the fact there is a relatively small difference in the results both genders achieve. This is an issue because students are selecting courses for misinformed reasons and they aren't the best fit. This could result in people entering careers that aren't as fulfilling. This is an argument for improving the current system.

However by school year 11 as students decide their post 16 courses they have been shown to subtly shift in the way they see the role of their teachers (Blenkinsop, McCrone et al. 2006). This shift is in the form of taking a more measured approach than they did at 14 years old by asking for more information on the content of the courses and their potential ability in them. Also at the age of 16 many students have a clear idea of a career path they want to take. This is especially true if it is STEM subject and specialising at this stage is more beneficial, enabling them to go into more depth in future study. This early specialisation is also looked on more favourably by Universities with often 3 science subjects required at A-level for certain courses. This is an argument for it being advantageous for students to specialise early. A balance needs to be found with giving students enough time to be studying a broad range of courses as to not narrow future options but at the same time allowing students to go into enough depth to prepare them well for a field useful to their future.

There have been numerous reports concerning how students make course decisions and the reasons for them. However little is known about the implications of these decisions on their future career. It is vital we combine the studies of how these students are making the course decisions whilst analysing the perceived effects this has had on for example the rest of the student's education and career. This is so we can best present the choice at the right time to students in this country thus improving our current educational system. To achieve this, this report will undertake a new survey to analyse the perceived implications of the choices on people's future education and employment. This will allow the question –'are young people making career decisions too early?' to be investigated. Student course decisions at 16 will be evaluated as to how effective they are perceived for the student's future career.

Finally the report has the ability to suggest if there are differences in the perception of career and choices by gender, social class and across time. The survey used contains background information on all these things so analysis could be used to spot attitude trends across differing people groups.

Data Collection

I collected data using an online survey. The survey was administered using google forms, a simple free to use survey software which is widely used in small scale survey data collection projects. The survey was open to respondents from the 17th to the 21st of August 2017. Survey participants were invited to apply from a link shared on the Warwick Q-Step Twitter page and on my personal Facebook.

Individuals age 18-49 who completed their secondary education in England were invited to take part. The survey excluded anybody under the age of 18 because at this point participants could still be in secondary education. Anybody over the age of 49 were also excluded in the survey. This is for a couple reasons, firstly the course choices they made at school would have been a long time to remember back to, meaning many may not have been able judge accurately their thoughts at the time. Secondly the secondary school education system has changed significantly over time so their experiences may be different. This large age range was used because one of the aims of the report was to study perceptions of these course decisions on career and employment so getting the views on people who have spent a longer time in employment is necessary. The geographic area the survey was made available to included all of England. The whole of the UK was not included because there are separate education systems in each of the UK nations.

The questions in the survey were split into 4 simple sections: Participant background, attitudes at the time of subject choice and the last two sections on their attitudes now. Firstly the participant background section aimed to build a simple but relevant overview of each person. This included their age, sex, social class, educational details (What time they left full time education, did they enter higher education) and other factors that may be interesting for analysis like what they most look for in a job. The second section asked about the mind-set of the participants when they were making their A-level subject choices. This involved finding out each participant's major influence in their decision, how important at this time they thought this choice was and how much they had decided upon about their future career. The first question in the section 'What was your favourite music artist at the time?' may seem irrelevant but was purely designed to encourage participants to cast themselves to the mind of 16 year old them and will not be analysed further. The third and fourth sections were on participant's perception of the effects of their choices. This asked what they would do differently, if they would have different motives now and asked directly if participants thought they had made their career decision and course decision too early. A copy of the survey used is included in the appendix.

This project has been carried out in accordance with the British Sociological Association statement of ethical practice. This research presented a survey that was optional and needed the consent via a submission of their response to be used. This was made clear in the survey details on the title page. All participants were kept anonymous.

The Sample

I used an online survey which was available for anyone to complete, if they choose to. I did not use a sampling frame which listed all eligible respondents in the population of interest. The sample is therefore a convenience sample. The fact the survey was shared on a University the department's social media to encourage participation may have resulted in sample bias with more highly educated participants than is representative of the population. Secondly Web surveys have limitations like socioeconomic biases in computer access and literacy (Treiman 2014). Finally a gender and age bias can occur from an imbalance in the followers of the used social media, and

also in the willingness of different groups of the population to take part in online surveys. The achieved sample size was 119. Details of the composition of the sample are provided in table 1.

Table 1: Characteristics of the achieved sample.

Variable			n (%)
Gender		Male	49 (41)
		Female	70 (59)
Age		19-24	26 (22)
		25-29	54 (45)
		30+	39 (33)
Highest Qualification	Educational	Degree or above	101(85)
		Further education, A level, GCSE	18 (15)
Parental Social Class		Higher managerial, administrative and professional	48(40.3)
		Intermediate occupations	29(24.4)
		Routine and manual occupations	41(34.5)
		Missing	1 (0.8)
Total			119

I asked participants what their mothers and fathers jobs were when they were 14. From this, I used the Office for National Statistics NSSEC coding tool¹ that gave a score estimating participant's social class from what respondents answered. As I had a score based from either parents job I then used the dominance method to get a final score for each participant. 'The 'dominance' approach measures all jobs in the household and typically assigns a measure based on the economically dominant occupation within the household' (Gayle, Connelly et al. 2015). Therefore, this was the highest social class score out of their mother and father giving each participant one score of a possible 8. This was then coded further splitting all respondents into three social classes higher, middle and lower.

Data Analysis

The data were analysed using Stata. The data were first recoded and organised into the appropriate format for analysis. Several of the variables were organised into a smaller number of

¹ See here: https://onsdigital.github.io/dp-classification-tools/standard-occupational-classification/ONS_SOC_occupation_coding_tool.html.

categories to allow for more straightforward comparisons between responses. I present univariate and bivariate representations of the data. The analysis focuses on the seven main questions in the survey which relate to the research question. Then I examine bivariate relationships between responses to each of the questions and social class.

Results

Univariate

Figure 1: I made my school subject choice decisions too early.

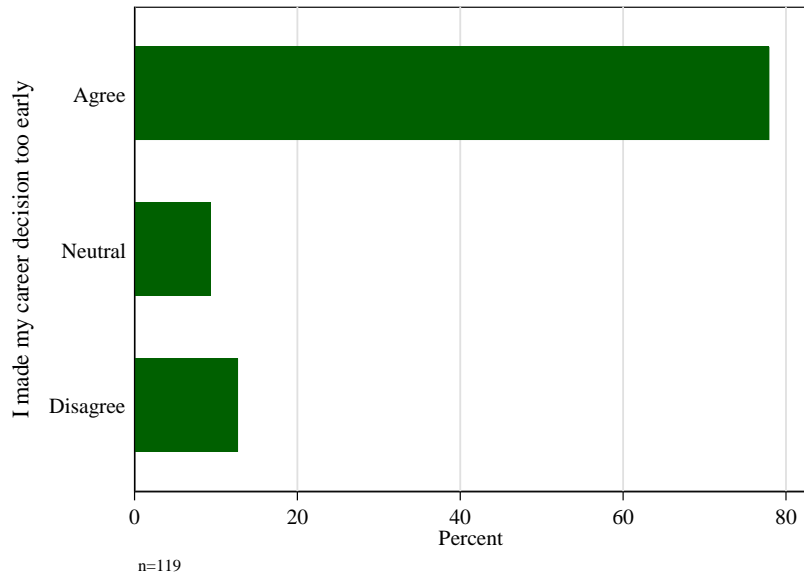


Figure 2: I made my career decision too early.

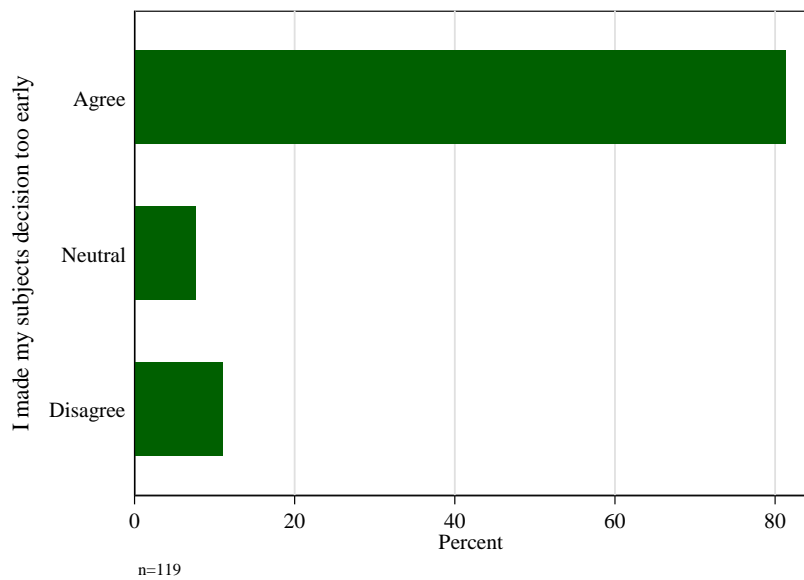


Figure 3: If you were to make your subject choices again, would you...

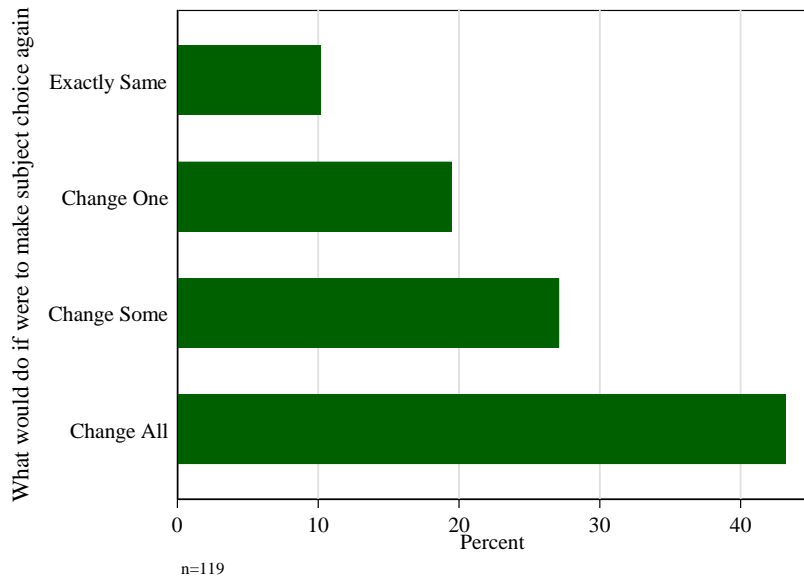


Figure 4: If you were to make your subject choices again, would you pick subjects that would allow you to go to a better university/college?

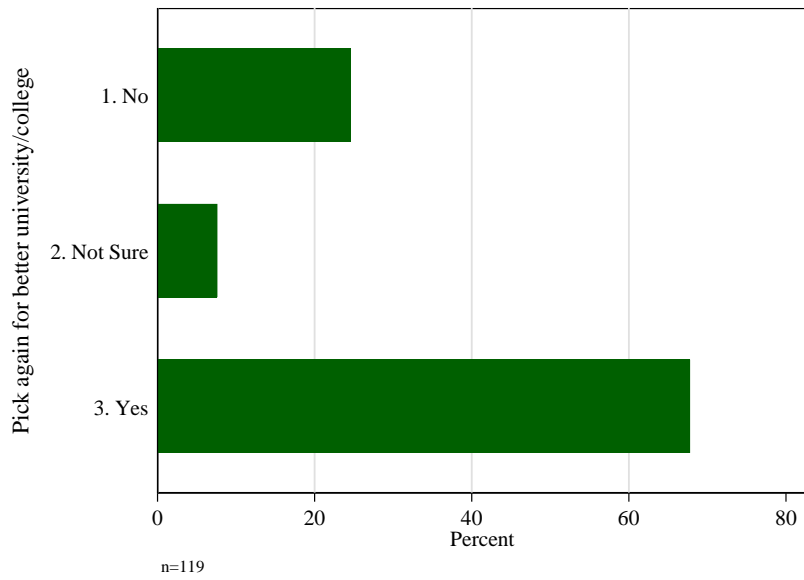


Figure 5: If you were to make your subject choices again, would you pick subjects that would allow you to get a different job?

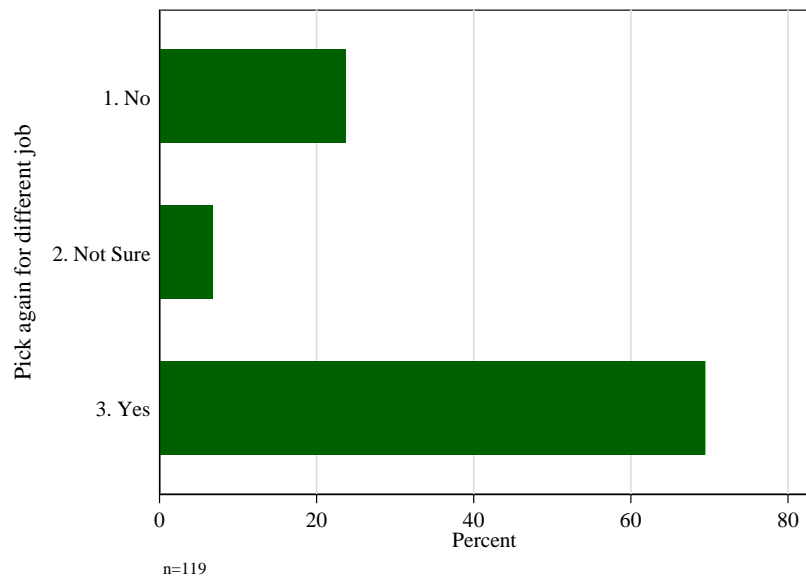


Figure 6: If you were to make your subject choices again, would you pick subjects that would allow you to get a higher paying job?

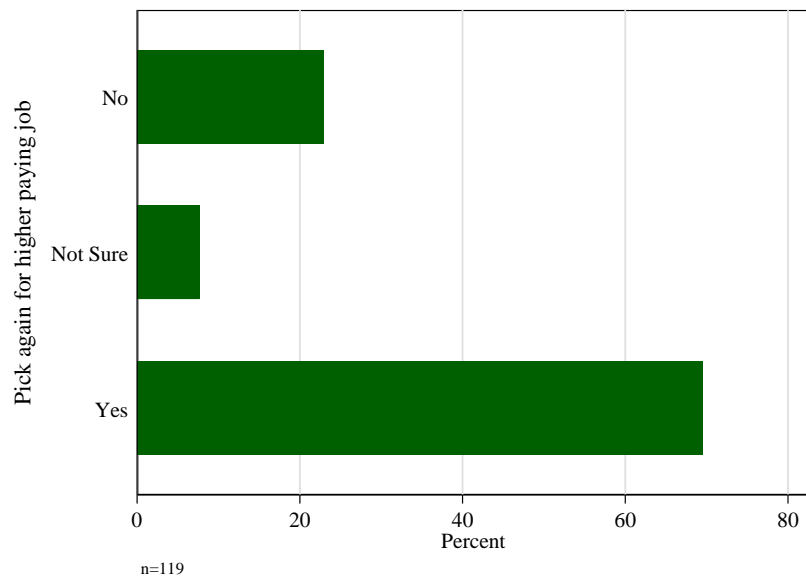


Figure 7: If you were to make your subject choices again, would you pick subjects that would allow you to get a more fulfilling job?

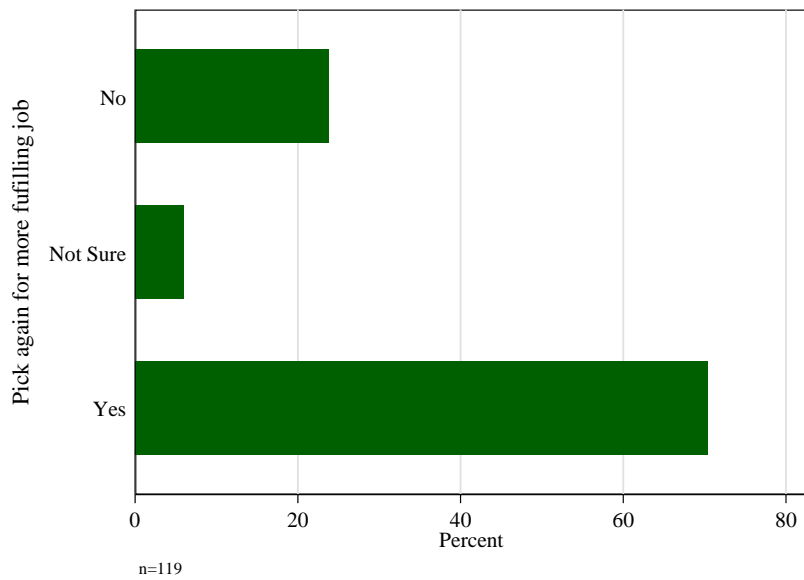
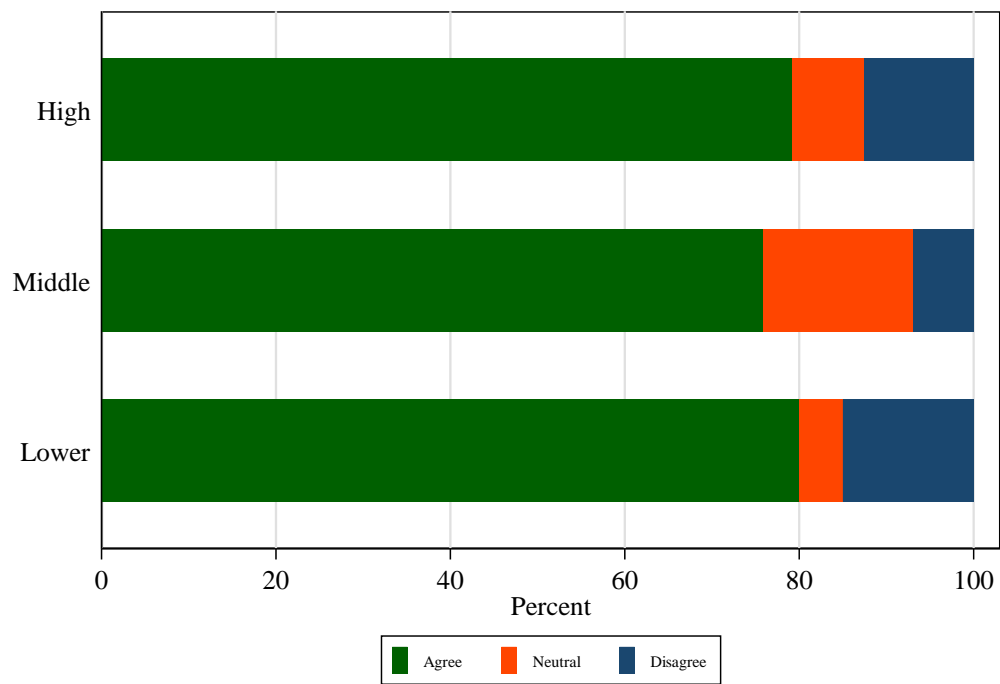


Figure 2 shows that the large majority of people (more than 80%) believe they made their career decision too early. The majority of respondents also believe they made their subjects choices too early. This is supported by only a small fraction (10%) saying they would pick the same A-levels if they were to choose again now and nearly half saying that they would completely change what courses they took. It could be argued the data obtained indicates people perceive subject choice to be important to their career with a strong correlation ($r=0.6127$) between respondents thinking they picked both subjects and careers too early. Respondents generally answered that they would pick differently if they were to pick again now in regards to having a more fulfilling, well paid and a differing job to what they have now. This is shown in figures 4, 5, 6 and 7.

Figure 8: I made my school subject choice decisions too early BY Parental Social Class.



n=119

Figure 9: I made my career decision too early BY Parental Social Class.

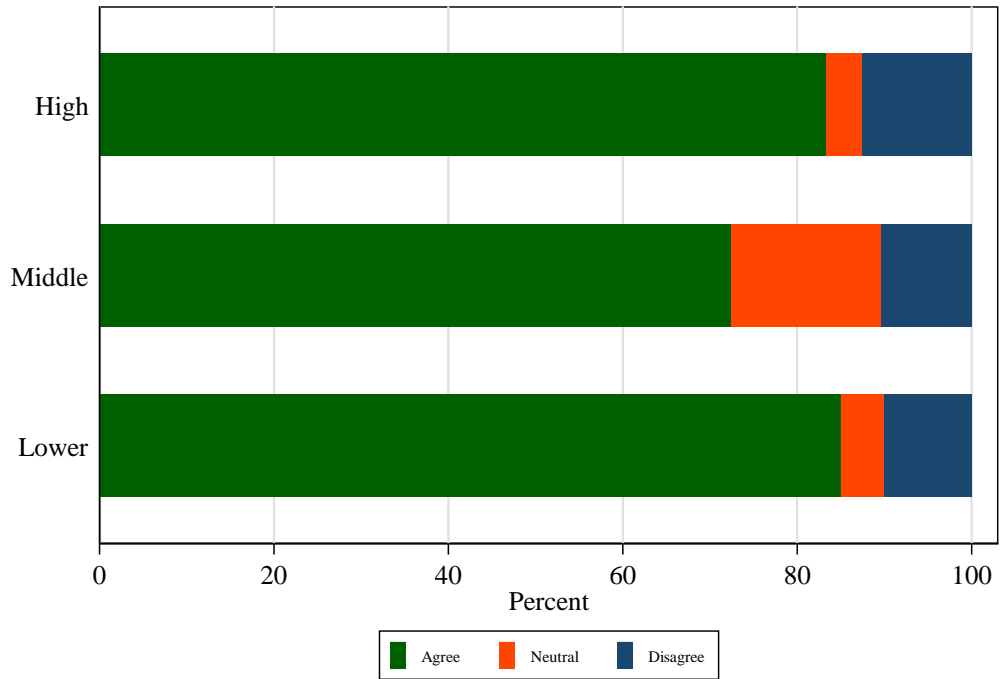


Figure 10: If you were to make your subject choices again, would you... BY Parental Social Class.

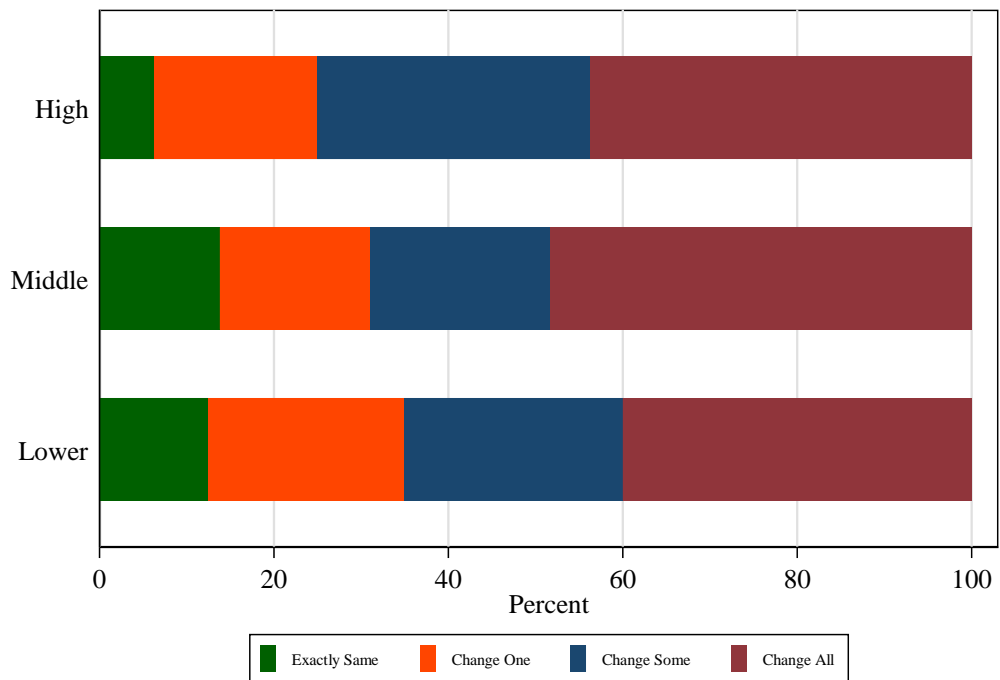
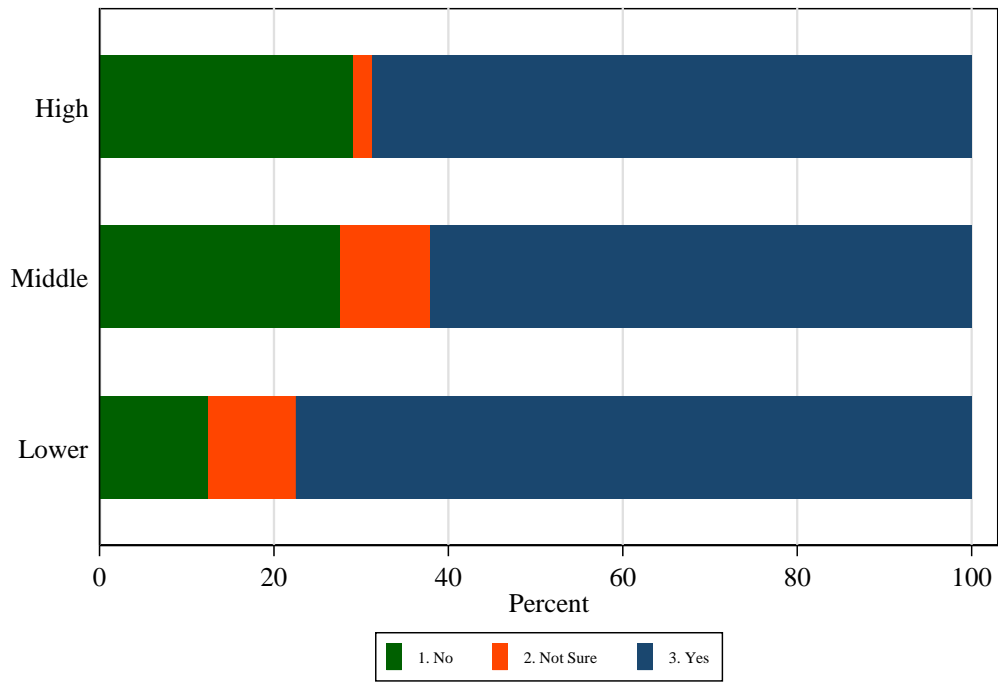
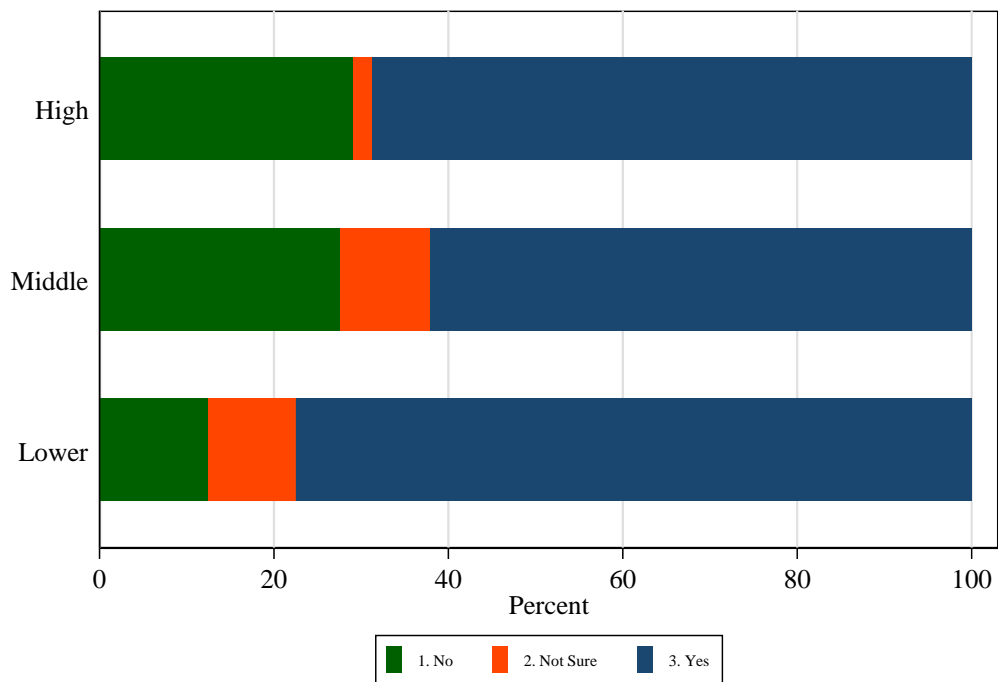


Figure 11: If you were to make your subject choices again, would you pick subjects that would allow you to go to a better university/college? BY Parental Social Class.



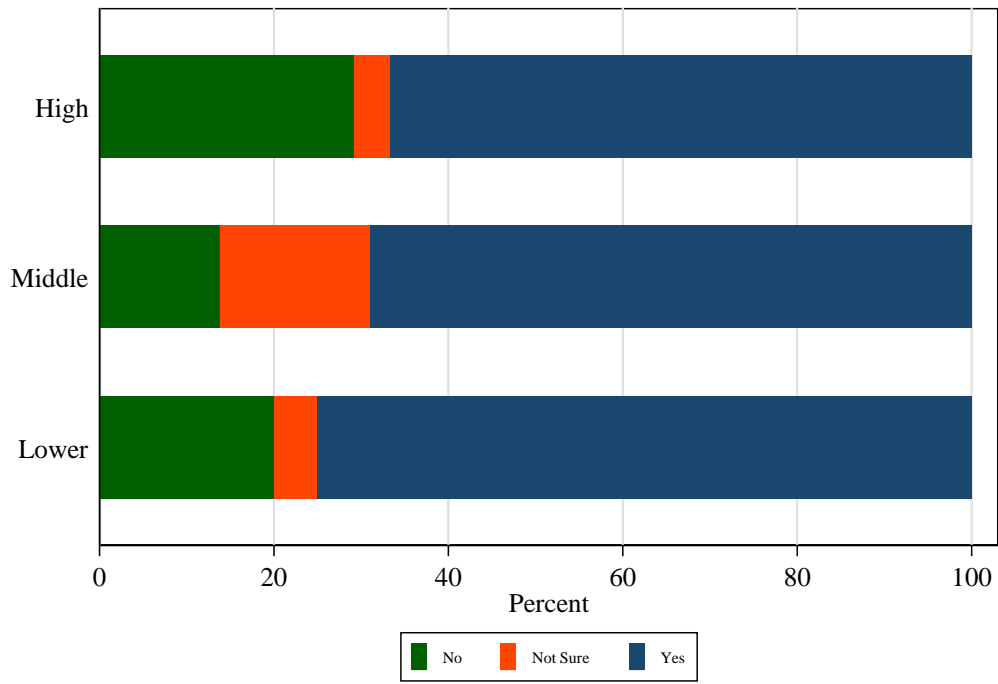
n=119

Figure 12: If you were to make your subject choices again, would you pick subjects that would allow you to get a different job? BY Parental Social Class.



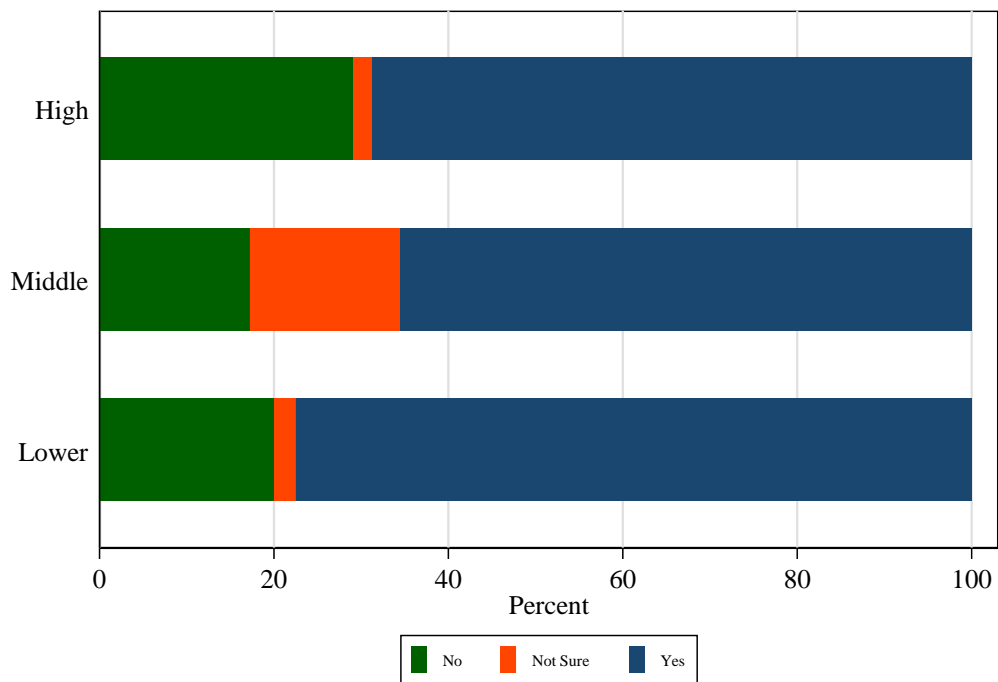
n=119

Figure 13: If you were to make your subject choices again, would you pick subjects that would allow you to get a higher paying job? BY Parental Social Class.



n=119

Figure 14: If you were to make your subject choices again, would you pick subjects that would allow you to get a more fulfilling job? BY Parental Social Class.



n=119

There are large social class inequalities in educational and occupational attainment in the UK (Jackson, Erikson et al. 2007, Boliver 2011). Therefore, it is possible that there would be differences in the way people from social class backgrounds view their school subject choice decisions. In this section, I investigated this by producing a series of graphs comparing the responses of people from different social class backgrounds. No formal statistical tests have been presented but the general patterns of difference between the three groups can be observed from the figures. I can see that in figures 11,12,13 and 14 if they were to pick courses again, the respondents making up the lower class are more likely than the middle and higher classes to pick differently to get a more fulfilling, higher paying and different job. This indicates there could be a class inequality in the success of course decisions made at 16 with students in higher socio-economic positions being able to make more informed decisions. The lower class category is also more likely to think they made their career and subject decisions too early (figure 8 and 9) showing further inequality in the perceptions between the classes. However the middle class is much less likely to think this is the case. Nearly 30% of middle class respondents didn't think they made their career decision too early compared to the lower and upper class categories.

Discussion

My results show that population believe young people are making course decisions too early in England. This supports the claim made in many newspapers like those that were discussed in the introduction. They agree with the claim that many students regret their A level choices (Which? Press Office 2016) and suggests there are implications of poor course decision making resulting from the problem discussed where there are many factors effecting student course choice that are unrelated to them being a good fit (Jin, Muriel et al. 2011). My results also show there are class inequalities in attitudes to course decisions. The lower class category has a higher fraction of people who think they made their course decisions too early and would pick the most differently now to improve their pay and job fulfilment. Finally because there is a strong correlation between participants who think they made their subjects decision too early and career decision too early, this suggests there is perceived connection in course decisions success and career success supporting its importance.

There are limitations of my work. The sample was both not large enough consisting of only 119 respondents and unrepresentative of the population of England with a much higher proportion of university graduates answering than there is in England as a whole. This is because a convenience sample was used so there was no control on respondents. More complex analysis could also add develop the interpretation of my results.

Conclusion

If these results can be relied upon or supported by other more extensive studies this would mean there is desire for students to make final subject decisions later on. This could result in a core syllabus carrying on until students get to 18 or allowing pupils to study a wider range of subjects. These future more extensive studies could be in the form of a larger stratified survey better representing the population confirming the attitudes expressed from this report far more reliably. These results would benefit policy makers by supporting reform of later secondary education in a way so young people do not have to specialise so early. This would allow young people more time to find an area of work or higher education that they can be successful in. Finally, if the pattern emerging in that younger people from lower class backgrounds perceive themselves to make less successful subject choices then this could also highlight an area for reform. Government could encourage schools to provide more information to all pupils especially ones with a lower social class in their course decisions at 16.

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Appendix

A copy of the survey I designed and used:

Subject Choices Survey

You are being invited to take part in a research study on career decisions and subject choice at A-Level. The project is being carried out by a Nuffield Research Placement Student as part of a project at the University of Warwick Q-Step Centre.

To be eligible for this survey you must have completed your secondary school (High school) education in England and be in the age range 18-49.

The survey should take no longer than 5 minutes to complete.

Completing the online survey will be taken as consent for your data to be used for research purposes.

This study is being carried out in accordance with the BSA guidelines of ethical research practice.

NEXT

Never submit passwords through Google Forms.

A little bit about you...

Gender? *

- Male
- Female

What is your age? *

Your answer

When you were age 14, what was your mother's main job? *

Your answer

When you were age 14, what was your father's main job? *

Your answer

Currently you are *

- Employed full time
- Employed part time
- A Student
- Unemployed

- A Carer
- Prefer Not to Say

Which one of the following 5 things do you most prefer in a job? *

- Work that pays well
- Work that gives a feeling of accomplishment
- Work where there is not too much supervision and you make most decisions yourself
- Work that is pleasant and people are nice to work with
- Work that is steady and there is little chance of being made redundant

At what age did you leave full time education? *

Your answer

What is your highest educational qualification? *

- None
- GCSE (or equivalent)
- A-Level (or equivalent)
- Further Education Qualifications (e.g. HND, Apprenticeship)
- University Degree or Above

Think back to when you made your A-level subject choices at school...

At the time, who was your favorite music artist? *

Your answer _____

At the time, what was the single biggest influence on your subject choices? *

- Friends
- Parents/Guardians
- Future study aspirations
- Employment Aspirations
- Your teacher's opinions
- Advice from your school
- Enjoyment of those subjects
- How easy you thought those courses would be
- Not sure / can't remember

At the time, how important did you think these subject choice decisions were? *

- Very unimportant
- Unimportant
- Neutral
- Important
- Very important
- Not sure / can't remember

At this time, did you know what job you wanted to do? *

- I had no idea what I wanted to do
- I had a couple of ideas but nothing set on
- I had a general idea of what area I wanted to go into
- I totally knew what I wanted to do
- Not sure / can't remember

Think about how you now feel about your A-level subject choices...

If you were to make your subject choices again, would you... *

- Pick exactly the same subjects
- Change 1 subject
- Change a couple of subjects
- Pick totally different subjects

If you were to make your subject choices again, would you pick subjects that would allow you to go to a better university/college? *

- Yes
- Not Sure
- No

If you were to make your subject choices again, would you pick subjects that would allow you to get a different job? *

- Yes
- Not Sure
- No

If you were to make your subject choices again, would you pick subjects that would allow you to get a higher paying job? *

- Yes
- Not Sure
- No

If you were to make your subject choices again, would you pick subjects that would allow you to get a more fulfilling job? *

- Yes
- Not Sure
- No

How much do you agree with the following statements...

I made my school subject choice decisions too early. *

- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree
- Don't Know

I made my career decision too early. *

- Strongly Agree
- Agree
- Neutral
- Disagree
- Strongly Disagree
- Don't Know