Young people's attitudes to careers & futures

UNBOXD Research report 2014/15
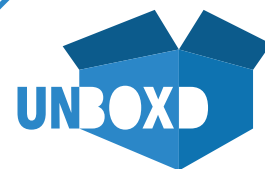
UNBOXD

About **UNBOXD**

UNBOXD is working to enhance social mobility. Through guidance and training, we support young people in making their aspirations a reality. We unlock self-awareness, values and individual aspirations, which we believe are critical foundations for making key choices and decisions about the future.

We believe that a young person's future should not be limited by their social background and that all young people need access to consistent, good quality advice and support when thinking about their futures.

Our work is centred on values and has two key strands:

1. Ensure an individual understands their own personal values;

2. Enable an individual to use their values as a tool to plan their route from aspirations to reality.

What is unique about this?

- Our approach is grounded in research

- Our focus on values as a basis for decision-making

- Our methodology used to understand values and how they vary across age, gender, schooling system and socioeconomic status

- Our commitment to a personalised approach to connecting young people's aspirations to reality

- Our vision for a more socially mobile society in all directions – not just focusing on the privileged or disadvantaged

Our research

We combine qualitative and quantitative methodologies with in-depth statistical analysis to look at the underlying relationships between how young people relate to ideas about careers, money, family and, ultimately, their futures.

This approach enables us to develop an understanding of how young people's attitudes and values towards their futures differ with age group, gender, schooling system, location and other important variables, such as socioeconomic background and culture. This is our first report on the results of our initial investigations using this methodology.

Our programmes

Based on existing studies and our own research, we have designed flexible programmes that allow young people to discover what is important to them and how these priorities translate into values. Participants learn what values are, how they can support decision-making and, crucially, how their values can be represented in their own plans for the future.

The delivery format for our programmes is very flexible to allow them to be easily adapted to different schools, class sizes and ages. Each programme is tailored to the age and needs of the young people.

Introduction

i) Social mobility and young people's aspirations

Careers are the vehicle we use to earn money, reach financial stability and form the basis from which we may enjoy life, have a family and live contentedly. Job satisfaction and economic security were listed as the third most important measures of 'well-being' in a report by the UK Office for National Statistics in 2011, next only to health and good connections with friends and family. Education and training was listed as the fifth most important measure of well-being, upon which a satisfying job and economic security increasingly tend to lie, as shown by the steady rise in numbers of young people studying for first degrees since 2012/13 (DfE, 2014).

According to Hooley et al (2014), a socially immobile society is one in which 'accidents of birth with attendant access to financial, social and cultural capital strongly influence the life chances of individuals.' Unfortunately, research suggests that social mobility in Europe and North America is declining (Blanden et al, 2005), with social immobility being particularly prevalent in economies that have a high level of inequality (BIS, 2011). The 2011 Department for Business and Skills report also highlights that the ways to combat social immobility are complex: some methods that focus on wage distribution, for instance, may reduce economic growth. Furthermore, although increased investment in skills for the labour force is widely highlighted as a method for tackling social immobility, addressing the skills gap at the bottom is not necessarily the most effective method. It may be that raising the 'middle' skilled workers' skill levels is more effective in the long term for growth and social mobility.

The BIS (2011) report identifies that changing young people's decisions about their future at key points in their development (i.e. whether to stay in education after the age of 16) may actually have a greater positive effect on social mobility than focusing directly on their skills. This built upon a report by the Department of Education and Skills (2003) that recognised young people's attitudes to the future were severely constrained by perception of opportunities, predispositions and personal history. As the Gatsby report published in 2014 put it, '…[career] knowledge may already be available to pupils from families of graduates and professionals, but if most of your family are unemployed or in low-skilled jobs, how would you know?' The DfE (2003) report also revealed that attitudes vary with age, gender, location, culture and socioeconomic status, lending further weight to the fact that inequality is a driver of social immobility.

In 2011, the Joseph Rowntree Foundation produced a report concluding that the low aspirations of young people and their families often explain their educational and work outcomes. In 2014, the Education Endowment Fund commissioned a report on aspiration interventions indicating that although some students may have high aspirations, the main problem is the gap between aspirations and how to achieve them. This is also addressed by the findings of Barclays LifeSkills Youth Barometer (2013), which indicated that 45% of young people aged 14–25 believe a lack of self-confidence will be the main barrier to achieving their dream futures.

It, therefore, became clear that in order to address the issue of social mobility, the process of supporting young people's decisions about their futures is threefold: we first need to address the attitudes of young people towards careers; then the drivers of these attitudes; and, finally, how we can develop young people's confidence to actually achieve their future aspirations. This was the basis for UNBOXD,

founded in July 2013, whose aim is to enhance social mobility by supporting young people from all backgrounds to make their aspirations a reality.

ii) Benchmarks for careers guidance

In 2012, City and Guilds released a report on the views of young people on education and employment. Their main conclusion was that the link between education and employment is central to tackling the issue of youth unemployment. The Gatsby (2014) report also highlights that career choices are closely tied with educational choices. If a young person knows what career direction they want to take, they can make appropriate educational choices. New statutory guidance issued by the Department for Education (2014) states that it is now mandatory for secondary years 8–13 in England to receive independent careers guidance that leaves them inspired and motivated to fulfil their potential, and able to develop high aspirations and consider a broad range of careers. Therefore, it is appropriate to develop decision-making interventions relating to careers within an educational setting.

Hooley et al (2014) discussed the requirements for 'good career guidance', drawing from the Gatsby (2014) report. They highlighted that a broad range of activities (curriculum based, employer engagement, work experience and one-on-one guidance), early interventions (from at least year seven in England) that are sustained throughout their education and progress accordingly, and access to high quality information and resources delivered by trained professionals are all key aspects of good career guidance. The Gatsby (2014) report outlined a set of benchmarks that they suggest educational institutions should be required to meet in order to deliver good careers guidance. This set of benchmarks can also be thought of as a theory of change of careers guidance, and is an appropriate setting on which to categorise the impact and involvement that UNBOXD aims to have within the context of good careers guidance.

Gatsby's (2014) eight benchmarks are:

1. A stable careers programme
2. Learning from career and labour market information
3. Addressing the needs of each pupil
4. Linking curriculum to careers
5. Encounters with employers and employees
6. Experiences of workplaces
7. Encounters with further and higher education
8. Personal guidance

In addition to outlining these benchmarks, the report also identified those that are currently least met by schools in England. In particular, only 20% of schools had met number four, linking curriculum to careers, specifically exposure to careers linked to disciplines such as science, technology, engineering and mathematics (STEM) subjects by the age of 14. There is significant scope within the context of UNBOXD's current activities to contribute to benchmarks one, three, four and eight. Importantly, UNBOXD has the capacity to focus on developing curriculum-based approaches to careers guidance that not only fits within the personal, social, health and employment (PSHE) curriculum, but also works with more specific disciplines such as STEM subjects.

iii) Value-led interventions

'Values' have been defined as 'beliefs that are experienced by the individual as standards that guide how he or she should function, they are cognitive structures, but they also have behavioural and affective dimensions.' (Brown, 2002). There is significant evidence (Briscoe and Hall, 2006; Briscoe et al, 2006; Brown, 2002; Anana and Nique, 2010; Feather, 1988; Mitchell et al, 2008; Boe et al, 2011; Barclay, 2004) to show that values play a key part in determining young people's future trajectories, specifically in relation to protean careers – careers, according to Hall (1996) that offer a whole-life perspective, mobility and developmental

progression. Briscoe et al (2006) show that in attitudes towards protean careers, value-driven predispositions are a key scale indicator for who would choose such a career. Brown (2002) has also shown that work values are critical variables in career development processes and Feather (1988) demonstrated that values are key drivers of course enrolment. In addition, Mitchell et al (2008) have shown the reciprocal relationship between values influencing choice of college major and, subsequently, the studying of that major influencing an individual's values. This evidence opens up avenues of research into the types of values that determine young people's choices.

To date, research on young people's values and their links to careers and career ambitions has tended to focus on subject-specific disciplines (Boe et al, 2011), university students (Newton et al, 2010; Schumacher, 1963; Mitchell and Thornton, 2008) or significantly disadvantaged individuals, such as young offenders or young people not in employment, education or training (NEETs; Barclay, 2004; Bynner and Parsons, 2002). Research has also tended to be qualitative (e.g. Brooks, 2003) or focus on a limited 'pre- defined' set of values and careers (e.g. Schoon and Parsons, 2002).

Together, these approaches to values and careers research may give a biased and limited view of young people's values and career aspirations. Without sampling all types of young people at different stages in their lives, allowing the young people themselves to explore the concept of values and offer their own definitions, or indeed offering a wider range of careers that they may be interested in, a complete view of the issues associated with young people and their choice of futures is not possible. Linking back to the eight Gatsby (2014) benchmarks for good careers guidance, it appears odd that there is a lack of focus on individual values. With significant evidence pointing towards the importance of values in career and educational choices, and the reciprocal impact these can have on young

people's futures, it seems clear that there also needs to be room for value-led interventions for young people in good careers guidance.

UNBOXD, therefore, set out to explore the concept of values, careers and aspirations for a range of young people from secondary to university level starting from the standpoint of the students themselves. Our aims were to both understand the values of young people and, in parallel, develop value-led interventions to support young people in their decision- making around careers.

iv) Research questions

In order to achieve UNBOXD's aims, we posed the following research questions:

1. What values do young people have that relate specifically to careers?
2. Do these career-related values vary with age group, gender and life stage?
3. What methods can we use to help young people become more aware of career-related values?
4. Does raising young people's awareness of career-related values increase their confidence in achieving their desired career?

Questions one and two were addressed using an attitudes questionnaire, developed and interpreted in collaboration with young people. Questions three and four were addressed by developing, piloting and evaluating a new value-led career planning intervention.

UNBOXD Career Values Questionnaire

i) Development of the questionnaire

An attitudes questionnaire was developed to understand the following research questions: one, what values do young people have that relate specifically to careers? And two, do these career-related values vary with age group, gender and life stage?

Qualitative focus groups were conducted with 12 16–18 year olds from the UCL Academy, exploring their thoughts on their futures, careers and aspirations. From these workshops, a series of value statements and open box questions were developed for the questionnaire. These were piloted with the students as part of an intervention session. Descriptive statistical analysis was completed on the answers, which was then fed back to them as part of a lesson. Feedback from the students was elicited on the results to explore whether the data we gathered from the survey produced valid and useful information. Expert feedback was also sought on the questionnaire design. Once the pilot phase for the questionnaire was completed, the final set of 39 value statements and nine open box questions were determined (see Appendix 1 for the final questionnaire).

The questionnaire was distributed in both paper and online formats (using Survey Monkey). Paper questionnaires were distributed, with consent, in schools that took part in the intervention pilot. Links to the online survey were also distributed in schools, as well as through social media and personal contacts.

Participants: 231 young people and young adults from 13 schools and four universities participated. The majority of participants came from two schools that also took part in the intervention pilot (City and Islington College and the UCL Academy).

ii) Questionnaire analysis

The questionnaire contained 39 value statements that participants rated in terms of their agreement, demographic questions and open box questions. It was analysed using exploratory factor analysis of the value statements, significance testing of differences between age and gender groups, and content analysis of open box questions.

Exploratory factor analysis is a statistical method of exploring underlying relationships between questionnaire variables (Norris and Lecavalier, 2009). In this case, factor analysis was used to explore the structure of and relative importance of young people's career- related values. The technique was used to reduce the large set of value statements to a smaller set of factors that were then used in further analysis. Each factor can be thought of as a measure of the degree to which a value is held. Appendix 3 describes this analysis in full.

One-way analyses of variance (ANOVAs) were used to test differences between Genders and between Age Groups for each of the derived factors (Field, 2005). Pearson correlations were used to test linear associations between Age and each factor. This was a quantitative approach to attitude measurement that aimed to provide statistically valid and reliable data on underlying value-based drivers of career choices.

Content analysis of text responses took the form of frequency analyses of vocabulary used, which indicated the main themes in responses.

The results are described below, with full technical details in Appendix 3.

iii) Exploratory factor analysis

The factor analysis (principal axis factoring with direct oblimim rotation) revealed five stable factors, using 30 of the 39 value statements, with moderate to good internal consistency, accounting for 33% of the total variance.

Table 2 lists the statements, describes the theme and gives the name of each factor. The statements within each factor should be conceptually similar, seeming to describe an underlying attitude, belief, motivation or value. Within each factor, if a participant strongly agreed with one of the statements, they were also likely to strongly agree with the other statements in that factor (except if a statement is marked with a '-', in which case they strongly disagreed).

Table 2: The factor solution

Factor 1 - 'Feeling Limited': Statements in this factor refer to 'feeling limited' in various ways (choices, money, ability and opportunity). A high score on this factor indicates the participant feels more limited in terms of their career options. This may be a perception/belief rather than a reality, and may reflect 'internal' barriers to achieving aspirations.

Factor 2 – 'Making a Difference': Statements in this factor concern wanting to 'make a difference' and find personal meaning in a career. A high score on this factor indicates that the participant wants to 'make a difference', inspire people, be remembered and find an enjoyable, stimulating career.

Factor 3 – 'Other Priorities': This factor contained statements about whether a personal life or a career/education is prioritised and the importance of education and money. A high score on this factor indicates that the participant prioritises their personal life over a career, and does not think education and money are important right now in terms of their career.

Factor 4 – 'Status and Ambition': Statements in this factor refer to money, ambition, being recognised for success, the economy and the difference between a career and a job. A high score on this factor indicates that the participant values monetary reward and status, and that ambition requires ruthlessness. This factor explores the idea of 'external' barriers/influences to achieving aspirations, which may not always be within the control of an individual.

Factor 5 – 'Family Oriented': Statements in this factor refer to family and 'helping'. A high score on this factor indicates that a participant values their family, and is influenced by family when making decisions. It also indicates that they believe helping others is a good thing.

These factors cover five core values by which young people's attitudes towards careers can be characterised. Other potential factors relating to a desire to help other people and self-defining as successful also emerged during the analysis, but were highly interrelated with the five factors described here.

Table 3 shows the correlations between the five factors, indicating that there is a weak to moderate correlation between factors one and four ('Feeling Limited' and 'Status and Ambition') and two and five ('Making a Difference' and 'Family Orientated'). This implies that the 'Feeling Limited' factor may be influenced by external factors as described in the 'Status and Ambition' factor, and vice versa, that the influences in the 'Status and Ambition' factor may lead to 'Feeling Limited'.

As both 'Making a Difference' and 'Family Orientated' involve other people, inspiration, helping and similar themes, this can begin to explain the potential relationship here.

Factor	1	2	3	4	5
1	1.000				
2	-.130	1.000			
3	-.076	-.022	1.000		
4	.254	.050	-.118	1.000	
5	.042	.213	-.006	-.005	1.000

Table 3: Correlations between the five factors

vi) Open questions

Word frequency analysis was carried out on the open questions, which was then used to develop simple statements, as seen below, that summarise the key words in relation to the open questions.

The primary outcomes were: What does 'success' mean to you?
Success is achieving a career, enjoying life, making money and being happy.

What are 'aspirations'?
Aspirations are dreams towards future goals in life and work.

What does a career mean to you?
A career is a job to enjoy for the long-term future.

What does 'a job' mean to you?
A job means having money.

What connects education and the world of work?
Knowledge, skills, qualifications and getting a good job connect education and the world of work.

What are values?
Values are important things: beliefs and morals that people live by.

What is the connection between values and a career?
Values are important to determine good choices you want to make about your job.

What are your current priorities in life?
Family, education and good grades are the current priorities in life for respondents.

What gives you satisfaction?
Helping people, being happy and having and achieving goals are all things that give people satisfaction.

Discussion

The open questions were valuable in helping us to interpret the definition most young people have for 'values', which broadly agrees with Brown's (2002) definition in the Introduction. This confirms that when we speak to young people about values, they are

clear about what we mean. It is clear that young people are also very aware of the connection between values and careers, highlighting further the case of inclusion of value- led interventions in careers guidance.

The important priorities and things that give young people satisfaction also map well onto the factors identified as being important to young people's decisions about their future, including helping people and family.

Further analysis

Factor scores were calculated using mean ratings across all statements in a factor (with ratings reversed where appropriate) so that a more positive score indicated greater agreement. Chart 1 shows the distribution of each of the five factor scores. Overall, most participants valued 'Making a Difference' when thinking about their future career, and most were 'Family Oriented'. Scores were, on average, more neutral for the 'Feeling Limited',

'Other Priorities' and 'Status and Ambition' factors. However, there was a range of agreement and disagreement for all five factors.
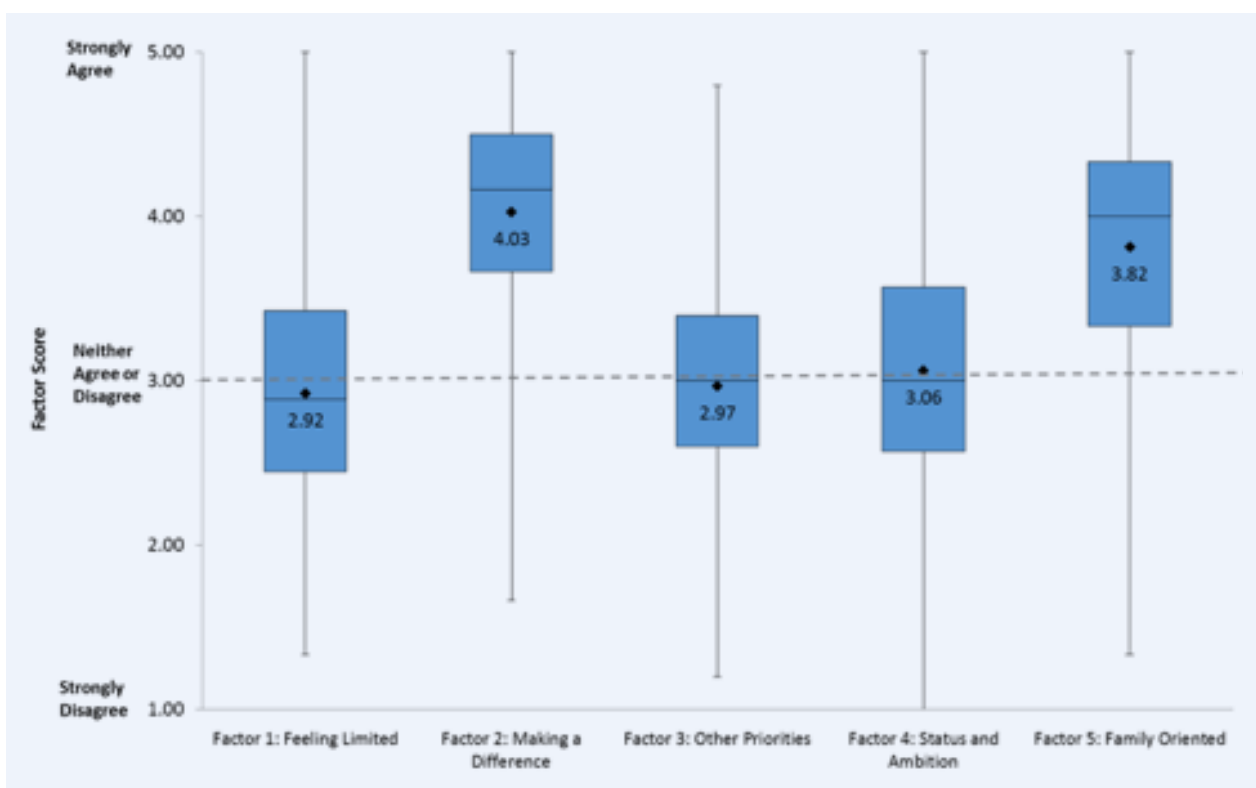

Chart 1: Factor scores

Notes on Boxplots: Boxplots are used to illustrate the factor scores in Chart 1. The diamond is the mean factor score. The blue box indicates the range of scores falling between the 25th and 75th percentile. The line across the blue box is the median score (50th percentile). The two tails extend between the maximum and minimum scores. N = 231.

iv) Gender

188 participants provided information about their gender. Of these, 64 (34%) were female and 125 (66%) were male. Genders were compared by performing a one-way ANOVA for each of the five factor scores. There were two significant results (p<.05, two-tailed).

Females were more likely than males to agree that they were interested in 'Making a Difference'. Males were more likely than females to agree that they had 'Other Priorities'.

The chart below summarises the descriptive statistics and results of statistical tests. A table of descriptive statistics and the full ANOVA results are in Appendix 4.
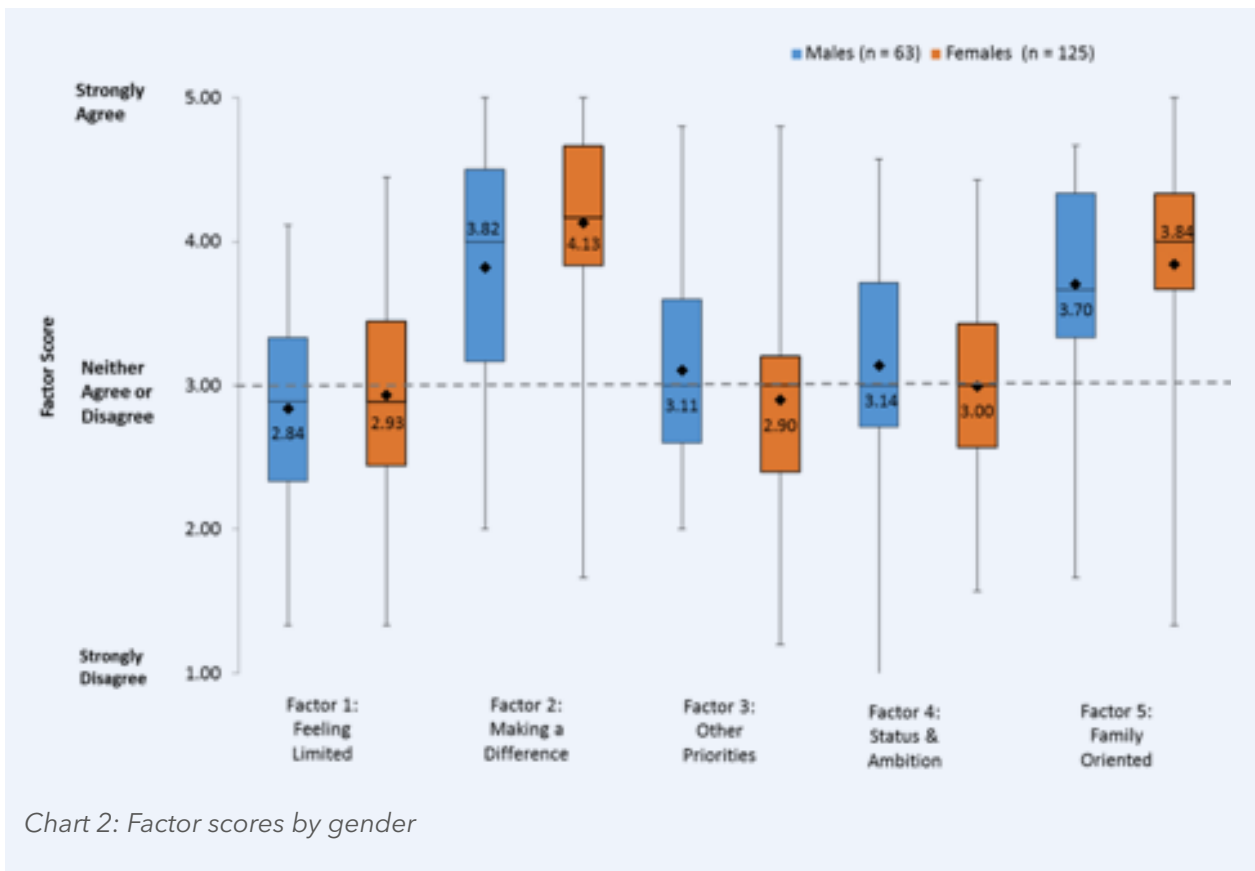

Chart 2: Factor scores by gender

v) Age

189 participants gave information about their age. Of these, most were aged 18 years or under (85%). The sample was divided into four groups: 15–16, 17, 18 and >18 years.
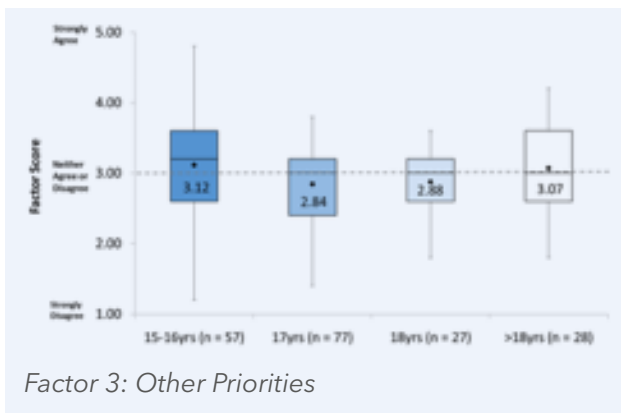
Pearson correlations were used to explore linear associations between Age and the five factor scores. There were two significant positive correlations (p<.05, two-tailed), indicating that as age increased so did scores on the 'Status and Ambition' and 'Family Oriented' factors. The 'Status and Ambition' result had the largest effect size and should be considered to be the stronger of the two findings.

When divided into four age groups (15–16, 17, 18 and >18 years), group sizes were very unequal, which can reduce the reliability of

ANOVA tests. However, descriptive statistics and an ANOVA table are provided in Appendix 4 for information. Post hoc comparisons were performed for significant results. The results indicate a non-linear association between Age and 'Making a Difference' with those in the 18 year group scoring lowest on this factor, particularly in comparison to the >18 year group.

The ANOVA results also support the significant correlation between Age and 'Status and Ambition', with scores on this factor gradually increasing with age (the difference between the 15–16 year and >18 year groups was significant in post hoc comparisons). Charts 3–7 show the factor scores for the four age groups.

Factor 1: Feeling Limited

Factor 4: Status & Ambition

Factor 2: Making a Difference

Factor 5: Family Oriented

Factor 3: Other Priorities
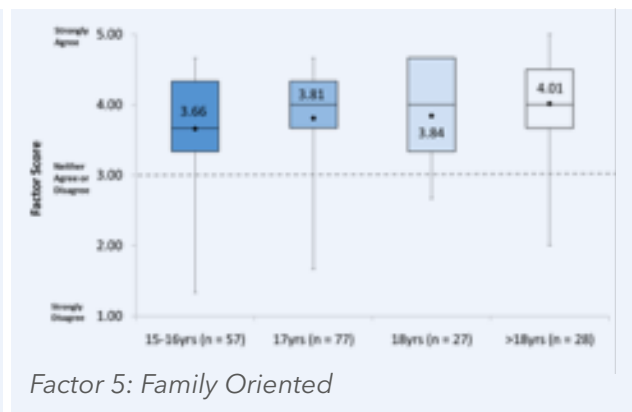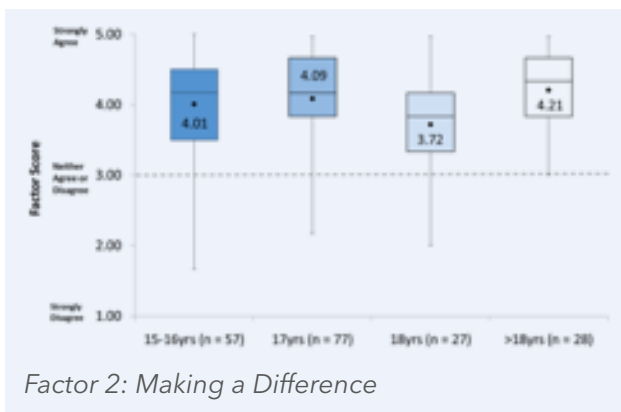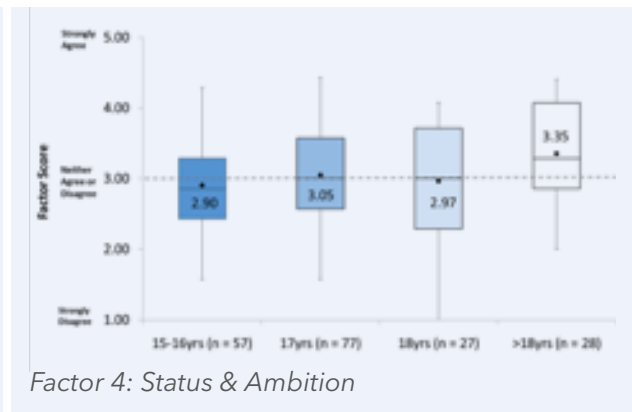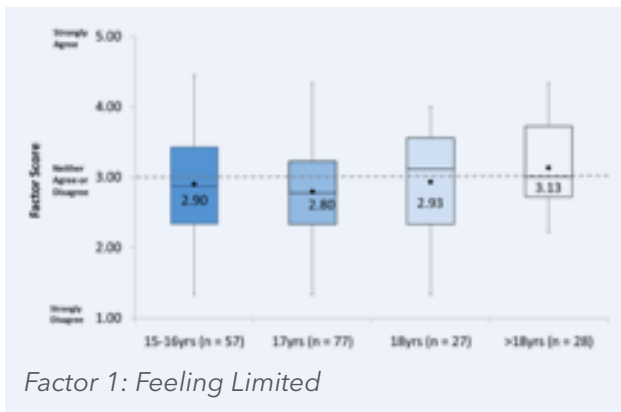
Older respondents >18 years tended to feel that 'Feeling Limited' was a larger factor for them than others, least of all for 15–16 year olds. 'Status and Ambition' was also an important factor for >18 year olds, possibly because they have lived through the recession and are feeling it hardest right now in terms of status. 15–16 year olds are most likely to agree with the 'Other Priorities' factor in their lives as they are not necessarily at the stage where they have to leave home and choose a career.

However, they are closely followed by those who are >18 years. This possibly correlated with the >18 year olds also feeling most strongly about the 'Family Oriented' factor, as this is potentially becoming more important as young people get older.

v) School system

186 participants gave information about their current school/university; however, the vast majority of these were school students, with only 23 in university, meaning we need more data from university students before we can generate statistically significant results (see Appendix 7). From the descriptive analysis, school students felt less strongly about all factors than university students, with the most stark differences being for the 'Status and Ambition' and 'Feeling Limited' factors, respectively.

This implies that university students feel more external pressure to succeed and achieve status and are possibly more influenced by Feeling Limited than are school students. For university students, having a career is also significantly more important than it is for school students.
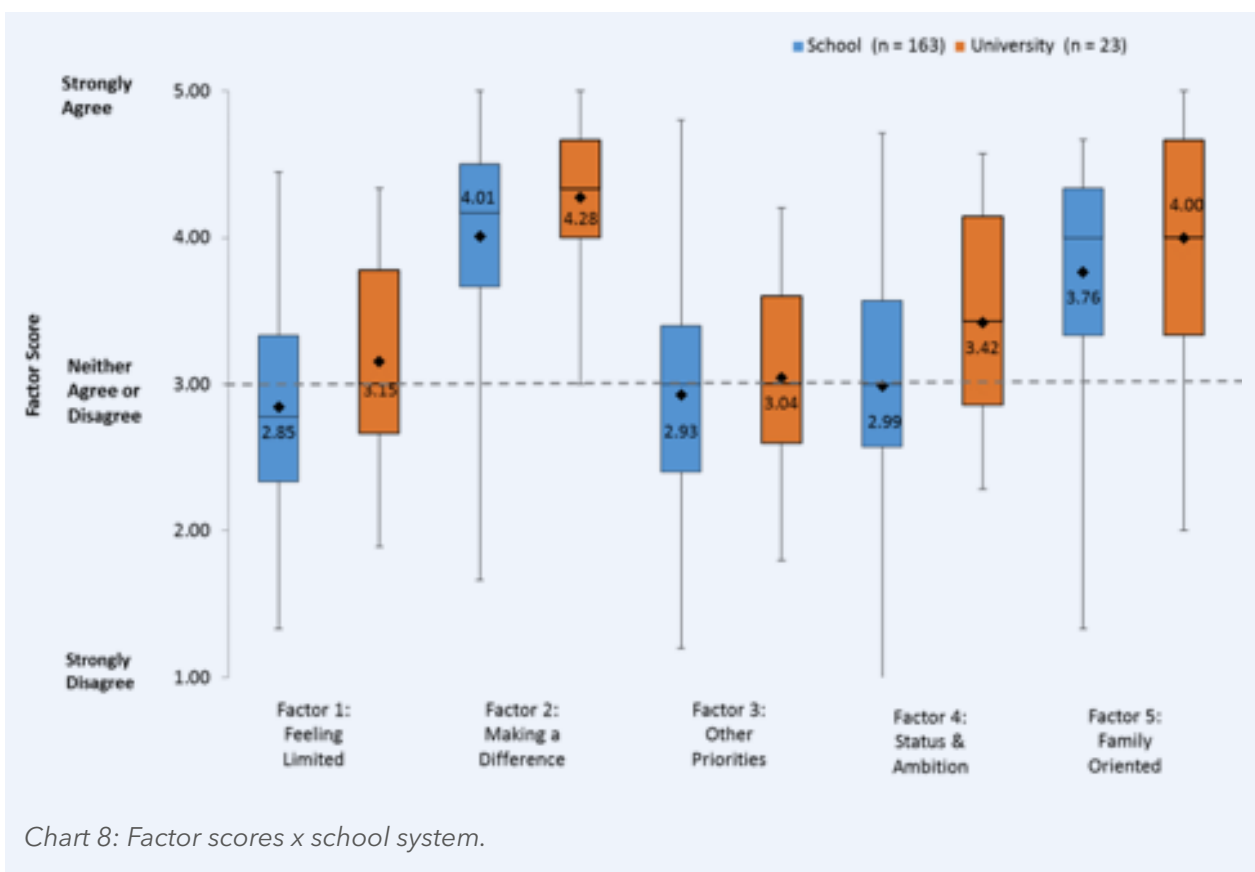

Chart 8: Factor scores x school system.

Pilot programmes

In order to answer research question three, 'what methods can we use to help young people become more aware of career related values?', we developed and piloted our own values discovery programmes. These initial programmes were based on existing best practice combined with our team's own experiences. The programmes were delivered in a range of educational settings with several target age groups in order to assess the impact the programmes have at each key intervention stage. As our results for research questions one and two were not available at the time of piloting, we relied on intermediate results from the research (which will not be reported here). We focused on developing the basic tools for making young people more aware of their career-related values, and our research can be integrated later in order to tailor the programmes for future delivery.

Our piloting methodology centred around the participatory action research model, so that we were part of the delivery of the sessions immediately, while actively refining and developing the programmes as time

progressed. Multiple pilot events were held while implementing a cyclical process of reconnaissance (delivering the tool), data collection (evaluation) and development of a hypothesis, which will inform the next stage of the tool's development (Lewin, 1952).

Initially, we developed a six-week programme of one-hour sessions to be delivered weekly to a 16–17-year-old age group. This was initially piloted at the UCL Academy in London with a group of six core students. The programme was developed with the aid of a secondary school teacher and incorporated mixed methods of teaching, including group work, discussion and debates, and individual reflection. In addition, students were encouraged to move around during the lessons, helping to stimulate them and keep them engaged with the subject matter.

The six-week programme was later refined using feedback from the initial pilots. During this stage of refinement, we integrated the use of the 5 Es model (Bybee et al, 1989) to structure the programme. See Table 1.

Phase	Summary
Engagement	The teacher or a curriculum task assesses the learners' prior knowledge and helps them become engaged in a new concept through the use of short activities that promote curiosity and elicit prior knowledge. The activity should make connections between past and present learning experiences, expose prior conceptions, and organize students' thinking toward the learning outcomes of current activities.
Exploration	Exploration experiences provide students with a common base of activities within which current concepts (i.e., misconceptions), processes, and skills are identified and conceptual change is facilitated. Learners may complete lab activities that help them use prior knowledge to generate new ideas, explore questions and possibilities, and design and conduct a preliminary investigation.
Explanation	The explanation phase focuses students' attention on a particular aspect of their engagement and exploration experiences and provides opportunities to demonstrate their conceptual understanding, process skills, or behaviors. This phase also provides opportunities for teachers to directly introduce a concept, process, or skill. Learners explain their understanding of the concept. An explanation from the teacher or the curriculum may guide them toward a deeper understanding, which is a critical part of this phase.

Phase	Summary
Elaboration	Teachers challenge and extend students' conceptual understanding and skills. Through new experiences, the students develop deeper and broader understanding, more information, and adequate skills. Students apply their understanding of the concept by conducting additional activities.
Evaluation	The evaluation phase encourages students to assess their understanding and abilities and provides opportunities for teachers to evaluate student progress toward achieving the educational objectives.

Table 1. Summary of the BSCS 5E Instructional Model. Source Bybee (2009)

As well as being appropriate for delivery across a six-week period for one hour each week, the programme was also flexible enough to be delivered in a day session (this idea came from the suggestion of teachers at the UCL Academy), or condensed into shorter sessions by combining several activities. In recognising the flexibility of our model, we were then able to create tailored sessions for other organisations.

Our second pilot was delivered at the Elizabeth Woodville School in Northamptonshire with 120 16–17 year olds as part of a careers day. We were asked to deliver four 45-minute sessions throughout one day.

The third pilot was delivered to a class of 25 9–10 year olds at the Highbury Quadrant School in London. This was a one-hour session, for which we condensed and simplified the programme of activities so that it was relevant for this age group, and reflected an appropriate learning outcome for the level and time available. We have since secured another five hour-long sessions with the class to run in 2015.

The final pilot of 2014 was delivered at the City and Islington Sixth Form College with 16–18 year olds, all of whom were foreign students with English as a second language. This was delivered in two 1.5 hour-long sessions over two weeks.

We were also able to secure two more pilot programmes at University College London, with Earth Sciences and Construction and Project Management undergraduate students, to run in 2015.

School	Age	No. programmes	Total no. of participants	Delivery format	Total delivery time per programme
The UCL Academy	16–17	1	6	6 x 60 mins	6 hours
Elizabeth Woodville School	16–17	4	120	1 x 45 mins	45 mins
Highbury Quadrant Primary School	9–10	1	25	1 x 60 mins	1 hour
City & Islington Sixth Form College	16–18	1	15	2 x 90 mins	3 hours

Evaluations

In order to answer research question four, 'does raising young people's awareness of career-related values raise their confidence in achieving their desired career?', the programme was evaluated using a survey developed specifically for the sessions. It was delivered before and after the programme in order to qualitatively understand whether there was any change in the students' attitudes and perceptions of their careers and futures due to the programme.

As a result of the lessons learnt from the UCL Academy and Elizabeth Woodville School programme pilots, we decided to adapt the evaluation forms in order to capture more quantitative data with which to understand impact. These new evaluation forms were piloted with the City and Islington Sixth Form College students.

For the Highbury Quadrant School pilot with 9–10 year olds, we simplified the evaluation forms significantly to reflect the adjusted learning outcomes and the student level. The surveys were also delivered before and after the session. After receiving the initial surveys back from the pilot class, we recognised that the answers indicated a high level of understanding of the concept and names of values, and that students knew what their own values were. Highbury Quadrant had recently undergone an exercise in defining its own school values, and some classes had been given lessons on the school's values and what they mean. Therefore, in order to check for potential bias, we decided to also ask another class from the same school, in order to understand whether this was normal for this age group, or whether the class may have been influenced by the recent lesson on their school's values.

Pilot programmes and evaluation results

Primary (Highbury Quadrant, 9-10 year olds, 1-hour session)

- After the session, when asked why they believe they can get their dream job, more pupils used words that indicated self-belief, confidence and training/learning opportunities ahead of them.

- After the session, pupils provided answers about their dream job that implied following some sort of dream/aspiration/ambition, whereas before the session, pupils answered the same question with more focus on money, popularity and success.

- Before and after the session, pupils tended to have a very narrow appreciation of the careers available to them, often limited to careers such as vet, doctor, teacher, etc. that they encounter in their personal experience.

- After the session, pupils tended to have a larger variation of words when asked to name some values that were important to them.

- Before the session, not all of the pupils believed they could get their dream job, but after the session 100% believed they could.

Statistical feedback

- 100% of pupils believe they can get their dream job post-session compared with 91% pre-session.

- 22% of pupils talk specifically about training and learning, 18% talk specifically about genuine confidence in their ability and 4% mention the ease of the field as the reason for their choice of dream job post-session, compared with pre-session where 25% mention training and learning, 12% mention a genuine belief in themselves and 12% mention the easiness.

- 95% of pupils now know what their values are compared with 87% pre-session.

- When asked what their values were, 36% of pupils provided words that were different from school values post-session, compared with pre-session where 20% were different.

- 59% rated the session 10/10 for enjoyment.

- 36% rated the session 10/10 for usefulness.

Secondary (UCL Academy, 15-17 year olds, 6 x 1-hour sessions)

- Students said they would prefer sessions specifically focussed on careers, possibly a result of the fact that they were advertised as careers advice sessions by the school.

- One student who had answered 'Don't Know' to every question in the initial survey had followed through with all six sessions and in the post-session survey said they felt confident about their values and future, and the opportunities available to them. The student wrote that they wanted to go to university and end up in a long-term relationship and stable job, and that they believed they could achieve the equivalent of their peers' success.

- Another student felt strongly confident in their values and how to use them in their life, and confident in the opportunities available to them after the sessions. Before the sessions, their assessment of what they will be doing in 10 and 20 years' time were 'working in a supermarket' and 'still working in a supermarket', but after the sessions these changed into travelling the world, going to university and having a stable career. In fact, they said they 'believed they had the ambition and drive' to succeed if pursuing these future options. They also

felt confident they could equal the success of their peers, when before they had categorically said they couldn't.

College (City and Islington College 16–18 year olds, 2 x 1.5-hour sessions)

- There is clear evidence that we helped more people to have clearer 10- and 20-year plans for where they wanted to be in their lives.

- Students are worrying less about their futures.

- Students feel more confident researching careers information.

- Students have a better understanding of what values are.

- Students are clear on what their values are.

- Fewer students believe that being realistic means settling for something.

- Fewer students used the words 'hopefully' in their descriptions of what they will be doing immediately after college, more were confident they would go straight to university or take a gap year.

- A significant number of students are very clear on what they will do immediately after college.

Statistical feedback

- Post-session, 35% of students had a clear idea of what they will be doing in 10 years, compared with 25% pre-session.

- 29% of students had a very clear vision of what they will be doing in 20 years post-session, as opposed to 18% pre-session.

- 58% of students claim to worry about their futures post-session, whereas 75% did pre-session.

- Post-session, 81% of students were confident they had a clear plan of how to reach a career they want, compared with 75% pre-session.

- 70% of students felt confident about researching careers information post-session compared with 50% pre-session.

- 94% understand what values are post-session, whereas 68% of students did pre-session.

- 70% know what their values are post-session, whereas 50% knew what their values were pre-session.

- Post-session, 52% believe being realistic means settling for something, compared with 62% pre- session.

- 70% of students have a clear idea of what they will do immediately after college post-session, whereas pre-session 31% of students did.

Discussion

These are the main points connecting the quantitative research to the pilots:

- We observed a lot of the 'Making a Difference' factors being expressed during the pilots, as well as the 'Feeling Limited' factors of lack of personal confidence and internal barriers to the students' personal development.

- We address the exact issues of the 'Feeling Limited' factors within our programmes, as highlighted by the feedback from the pilot evaluations. This indicates that we have identified an important area for young people, and have developed a value-led intervention that begins to address it.

- We came across lots of 'inspiring other people' and 'helping people' comments in the survey responses, which helps confirm the 'Making a Difference' factor.

- Family came up often, specifically in the students' 20-year plans, highlighting the importance of this factor in young people's futures.

Final discussion

Below, we summarise the key learning outcomes of the work we have completed:

- We are achieving our desired aims for the exploration of what values are.
- We are helping young people overcome their internal barriers of 'Feeling Limited'.

- We are helping them achieve their aspirations, and aiding them on a journey of personal discovery.

As a result of the research findings, we developed a simplified theory of change for UNBOXD value-led interventions, shown below.
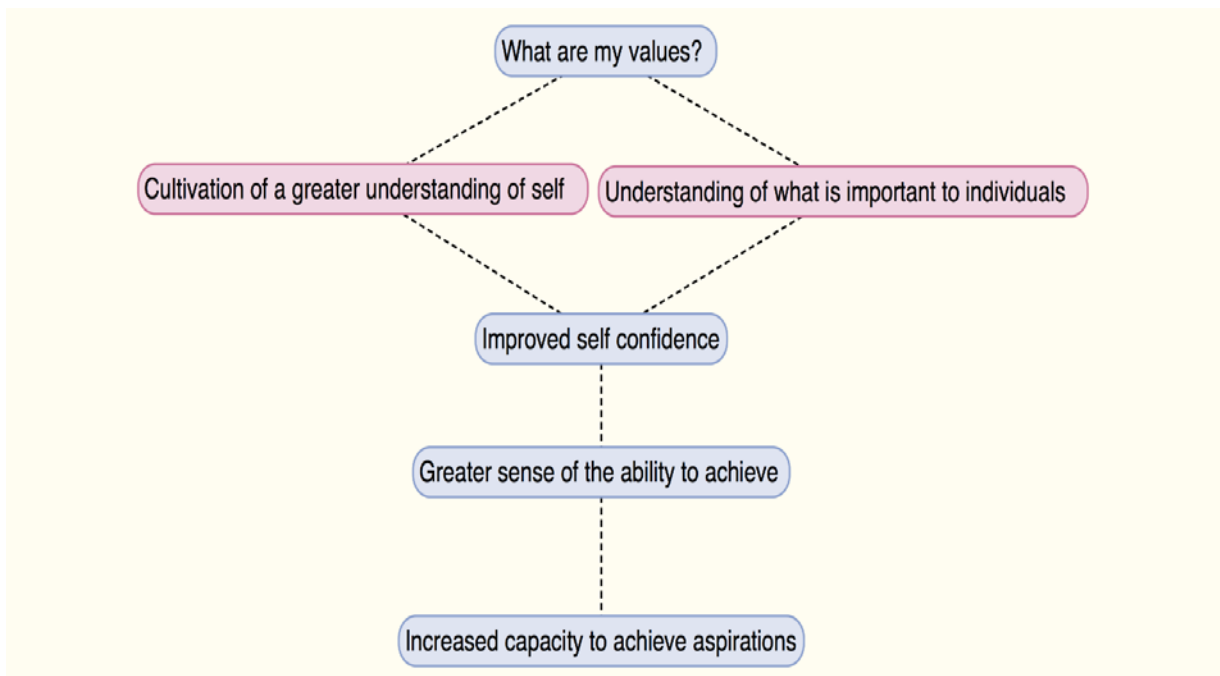
As an initial foray into the topic of young people's values and attitudes towards their careers and futures, and an exploration of what value-led interventions can have on these attitudes, this study has been successful. We have managed to identify five key factors that influence young people's attitudes towards their careers and futures; explore the varied relationships young people from different age groups, genders and life stages have towards their values; try out varied methods for helping people understand and identify their values; and confirm that raising young people's awareness of their career-related values increases their confidence in achieving their desired career.

However, we do need to gather more data to confirm that we are meeting our aims across wider groups of young people, and to explore further areas where we can improve in meeting the needs of young people. Therefore, in the next section we detail our plans for future research and programme development.

Future research directions and recommendations for programme development

Themes

Feeling Limited

We would like to continue to address 'Feeling Limited' as we have been in our programmes, potentially exploring more methods to overcome this factor, and strengthening the interventions we currently use.

Making a Difference

In our sessions, we would like to show how values can be used to explore career options by providing examples of how they can help young people make a difference in their lives and the lives of others. We would like to explore questions such as: how can we help people use their values to find a suitable career and make a difference? Can we focus our sights on careers and goals that specifically help people make a difference?

Family

Family is very important to people, especially those who are in university and slightly older. Therefore, we would like to explore questions including: how can we help these age groups develop their values and careers around their family? Can we help them come up with sustainable ways of living that meet their values and family needs? How can we help equip young people with the tools to assess and plan for this when the time comes? For older groups, we could explore the use of strategic life management skills using values.

Demographics

Women

If we work with women/girls specifically, we should focus on those internal limiting factors: low self-confidence; personal limiting factors around having little choice; and potential worries about the future and families, and how it can all fit together.

Men

For men/boys, helping fight the influence of status, money and ruthlessness as routes to careers might be useful. We could focus in on what success means, sustainable careers and helping them to focus on making a difference to other people's lives and personal validation of success.

Levels

Undergraduate

We would like to be able to offer workshops in a range of areas for undergraduates:

- Workshops that discuss participants' personal values and how they can use these to explore the different career options available to them.
- Workshops that enhance self-confidence and explore the meaning of 'success' in different contexts.

- Workshops that help to guide participants to use their values not only as a tool for exploring careers, but also as a tool for achieving a good work–life balance.

Primary

As primary pupils tended to have a very limited view of the careers available to them, we would like to help expand their understanding of jobs and careers outside of their personal experience. In addition, we would like to continue to explore the impact of the current work we have completed with primary.

Research

As highlighted in the Discussion, we would like to continue to conduct research on a regular basis to:

- Gather more data from a wider range of young people through qualitative data gathering (i.e. more university students and primary school children).
- Generate better insights into the factors we have already identified, and the relationships different groups of young people have with each.
- Explore in more depth the impact that various value-led interventions have on different groups of young people.

It is difficult to gather data from pilots and surveys on the influence of external factors addressed in the 'Status and Ambition' factor, and our current evaluation surveys were not designed to address this specifically. In the future, we would also like to gather more information on exactly how young people are affected by the external factors identified in 'Status and Ambition' and the reciprocal relationship between the two factors in order to develop interventions to address these in more depth.
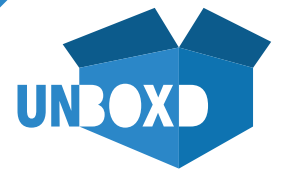
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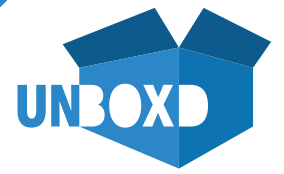
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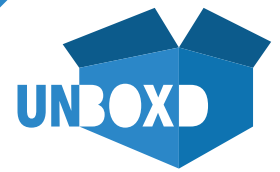
Appendix 1

Please see attached questionnaire.

Appendix 2

Please see attached evaluation surveys.

Appendix 3: analysis

A factor analysis of 39 rated attitude statements was conducted. Tests indicated that the dataset was suitable for factor analysis. Principal axis factoring with a direct oblimim rotation revealed five stable factors, with moderate to good internal consistency, accounting for 33% of the total variance. Factor scores were calculated using mean ratings across all statements in a factor (with negative loadings reversed) so that a more positive score indicated greater agreement.

Initial data quality summary:

- Sample size: 231 (after one participant was excluded due to 76% missing data). The analysis was run with and without a further 16 participants with more than 50% missing data.

- Participant-to-statement ratio: 1:6 participant-to-statement ratio, which is a good ratio for factor analysis. When participants with more than 50% missing data were excluded, the ratio dropped to 1:5.5, which remains a good ratio for factor analysis.

- Number of attitude statements: There are 39 attitudes statements, which well exceeds the 20 required for a factor analysis. If any questions were excluded, the participant-to-statement ratio should remain good. Nineteen questions had 5–10% missing data. These questions remained in the analysis.

- 'Don't Know' responses: 'Don't Know' responses were recoded to 'Neither Agree Nor Disagree' in order to place all valid responses on the five-point linear scale.

- Extraction method: Principal axis factoring was used as it is suitable for exploratory analysis.

- Rotation: A varimax rotation was used for the initial extraction, as it does not assume any association between factors (orthogonal) and should maximize separation between factors. However, further investigation of the factor structure indicated links between some of the factors, with stable cross-loading statements, and therefore a direct oblimim rotation was used to interpret and edit the factor structure. The two rotations returned very similar solutions.

- Correlation matrix: The matrix for the 39 attitude statements indicated a moderate number of small to moderate correlations. Approximately a third of paired correlations were significant $p<.05$ (one-tailed). This indicates some degree of association in the matrix, but it is not as highly associative as would be desirable. There are no instances of multi-colinearity. These features of the matrix indicate potential for factorability.

- Kaiser-Meyer-Olkin test: The Kaiser-Meyer-Olkin test of sampling adequacy was .687. This exceeds .5, indicating good factorability of the dataset.

- Bartlett's test: Bartlett's test of sphericity was significant at $p<.001$, indicating good factorability of the dataset.

- Communalities: Twelve statements had communalities >.4, indicating that most statements were not well accounted for by the initial solution.

- Scree plot (below): The initial extraction resulted in 13 factors with eigenvalues >1. Clear bends are indicated in the scree plot at three, four and seven factors, with little variance being added to the solution after seven factors. This suggests a few large stable factors, with some potential smaller factors. A range of solutions up to eight factors was assessed.

- Variance: The initial solution accounted for 45% of the total variance, which is an acceptable level for questionnaire data.

Above: Scree plot showing the initial extraction with 13 factors with an eigenvalue >1.
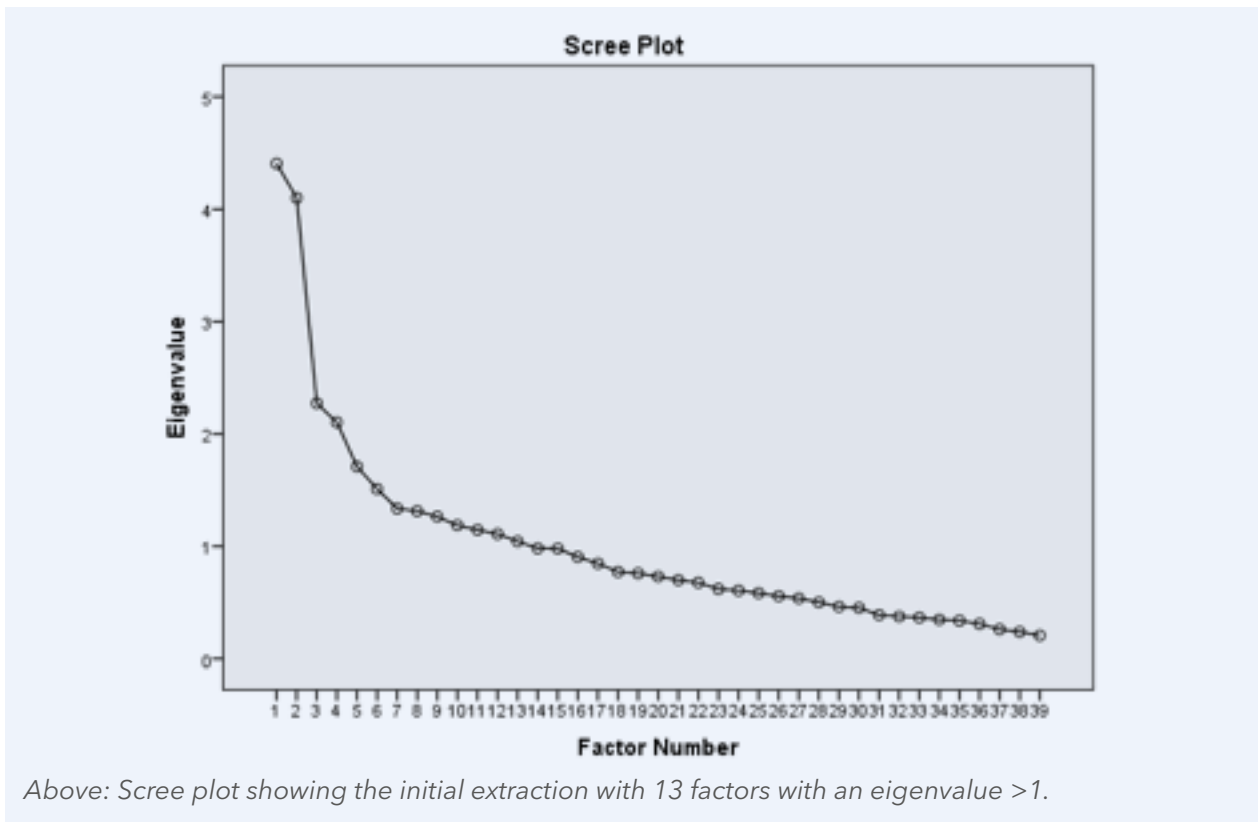
Assessing the factor solution:

The table below shows the strength of a range of solutions (from three to eight factors) against a number of criteria: statements per factor with a significant loading (>.3); strong markers (significant at >.3, and with a factor loading >

.2 difference from any other cross-loading); the number of non-loading statements; the number of cross-loading statements; the number of communalities >.4; and the total variance explained.

Factors	1	2	3	4	5	6	7	8	Sig.	Markers	No Load	Cross Load	Comm >.4	Var.
3	10 (9)	9 (5)	9 (7)						28	21	11	1	6	22%
4	10 (8)	10 (5)	9 (5)	4 (2)					33	22	6	4	6	26%
5	7 (5)	9 (5)	9 (7)	5 (1)	4 (1)				34	20	5	5	8	29%
6	6 (5)	9 (8)	9 (4)	4 (2)	4 (2)	2 (0)			34	21	5	3	8	31%
7	7 (5)	9 (5)	5 (3)	3 (2)	4 (2)	4 (3)	4 (1)		36	23	3	6	9	33%
8	5 (5)	9 (5)	6 (2)	3 (2)	4 (2)	4 (2)	2 (1)	1 (1)	34	20	5	5	11	35%

Table 1: Assessment of potential factor solutions

The smaller factor solutions (three and four) contained large factors. Although these solutions had some conceptual sense, they did not account for as many statements as larger factor solutions. However, the highest loading statements in each factor tended to remain stable across a range of subsequent extractions, indicating that these large factors were robust.

The eight-factor solution did not perform as well as some smaller factor solutions, returning a number of small factors that lacked conceptual sense, and hence utility.

The five-, six- and seven-factor solutions had the highest numbers of significantly loading statements. However, the five-factor solution had a number of large factors, two of which appeared to combine more than one concept, whereas the six- and seven-factor solution had some smaller factors that lacked coherence.

The five-, six- and seven-factor solutions were investigated further using a direct oblimim rotation to identify statements that were uninformative and/or unstable. Uninformative and/or unstable statements were then deleted in the order listed below, resulting in a stable five-factor solution.

Four statements did not load in either the five, six or seven initial factor solutions and were deleted. In addition, Q15 moved between the 'Family Oriented' factor and the 'Making a Difference' factor:

- Q6. A job is inevitable, a career isn't
- Q8. My lifestyle will influence my career
- Q9. I don't worry about my future
- Q15. I enjoy helping those close to me

In subsequent extractions, two further statements about 'helping' were observed to move between the 'Family Oriented' factor and the 'Making a Difference' factor and/or did not load significantly. There may be a further latent factor about 'helping' that has not emerged in the current questionnaire (e.g. due to sample size, wording or because there may be a hierarchical structure).

- Q24. I want to become a better person because of my career
- Q27. Helping others doesn't make you successful

Two further statements were unstable in the six- and seven-factor solutions and had weak significance in a large factor in the five-factor solution.

- Q5. Success is what I think of myself
- Q38. I want to be as successful as my friends and family

The following statement did not load across a range of five-factor solutions, and did not contribute to internal consistency in the six- and seven-factor solutions (tested using alpha reliabilities).

- Q31. A full-time job means I cannot have a family

After these deletions, the five-factor solution remained very stable. The seven-factor solution was very unstable and was not investigated further. The six-factor solution closely resembled the five-factor solution, but divided a large factor about money/ambition into two separate, but related, factors. However, overall, the six-factor solution was less stable than the five-factor solution. Therefore, the five-factor solution was chosen for creating measures for use in further analysis.

Table 2 shows the proposed five-factor solution. This retains 30 of the 39 original value statements. The solution accounts for 33% of the total variance in the data. This solution is identical when run with and without sixteen participants with >50% missing data, indicating good reliability.

The 'internal consistency' of each factor (indicated by alpha reliabilities) ranges from moderate to good. The first four factors are of an acceptable to good size, with factor one being large. The lowest loading statements could be deleted from factors one, two and four.

Factor five has only three statements, which is the minimum recommended. The third statement does not appear to be conceptually similar to the first statements. However, other deleted statements on the theme of 'helping' were sometimes associated with this factor. The statement is retained in order to keep the number of statements within recommended levels, but could be deleted.

Table 3 shows the correlation matrix for the factors: there are moderate correlations between factor one 'Feeling Limited' and factor four 'Status and Ambition', and also between factor two 'Making a Difference' and factor five 'Family Oriented'.

The meaning of the factors:

- The statements within each factor should be conceptually similar, seeming to describe an underlying attitude, belief, motivation or value.

- Within each factor, if participants strongly agreed with one of the statements, they were also likely to strongly agree with the other statements in that factor (except if a statement is marked with a '-', in which case they strongly disagreed).

- For ease of presentation, the factors have been given temporary names that were used during further analysis.

	Factor				
	1	2	3	4	5
Factor 1: 'Feeling Limited', 11.68% of variance, alpha = .730					
Q39. There are limited career choices for me	.648				
Q36. I believe I am good enough to get the job I want	-.502				
Q4. Money is an issue holding me back in my career	.476				
Q16. I can choose any career I want	-.473				
Q19. I don't have much choice over what I end up doing	.462				
Q28. I don't know where to start finding out about careers	.449				
Q29. I feel pressure to start doing something with my life	.415				
Q1. Even if I work hard I might not end up doing something I want	.398				
Q22. Being realistic about my future means settling for something	.373				
Factor 2: 'Making a Difference', 9.91% of variance, alpha = .797					
Q18. I want to make a difference in the future		.772			
Q26. I want to be remebered for what I do		.686			
Q12. I want to inspire others in my life		.633			
Q30. I like discovering things		.568			
Q7. I think working for something you believe in is important		.532			
Q34. I want to have a career that I enjoy		.505			
Factor 3: 'Other Priorities', 5.03% of variance, alpha = .575					
Q10. I think my personal life is more important than my career			.533		
Q20. Money doesn't determine whether a job is good or not			.524		
Q23. Education isn't everything, I can work hard later			.422		
Q25. A career comes before a social life or family (-)			-.403		
Q17. If I do not get a degree I cannot be successful (-)			-.358		
Factor 4: 'Status & Ambition', 3.73% of variance, alpha = .690					
Q35. In a good career you make lots of money			-.301	.612	
Q37. Being ambitious means you have to be ruthless				.593	
Q13. Money determines whether a job is good or not			-.432	.484	
Q21. The economy will drive my decisions				.413	
Q14. A career matters more than a job				.404	
Q32. Success is what other people think of me				.398	
Q33. To be successful you have to be ambitious				.350	
Factor 5: 'Family Oriented', 3.13% of variance, alpha = .424					
Q3. Family is important to me					.773

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Table 2: Proposed 5 Factor Solution, accounting for 33% of the total variance

Appendix 4

Gender descriptives and ANOVA tables

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	63	27.3	33.5	33.5
	Female	125	54.1	66.5	100.0
	Total	188	81.4	100.0	
Missing	Missing	43	18.6		
Total		231	100.0		

Table 4: Gender

		Sum of Squares	df	Mean Square	F	Sig.	Effect Size (eta-squared)	Observed Power
Factor 1: Feeling Limited	Between Groups	.353	1	.353	.826	.364	.004	.148
	Within Groups	79.549	186	.428				
	Total	79.902	187					
Factor 2: Making a Difference	Between Groups	4.034	1	4.034	9.055	.003	.046	.849
	Within Groups	82.858	186	.445				
	Total	86.892	187					
Factor 3: Other Priorities	Between Groups	1.811	1	1.811	4.167	.043	.022	.528
	Within Groups	80.847	186	.435				
	Total	82.659	187					
Factor 4: Status and Ambition	Between Groups	.837	1	.837	1.823	.179	.010	.269
	Within Groups	85.397	186	.459				
	Total	86.234	187					
Factor 5: Family Oriented	Between Groups	.840	1	.840	1.956	.164	.010	.285
	Within Groups	79.859	186	.429				
	Total	80.699	187					
Q49. Right now, how much does having a career mean to you (where 1 is not a lot and 10 is a lot)?	Between Groups	7.382	1	7.382	1.614	.206	.009	.244
	Within Groups	836.964	183	4.574				
	Total	844.346	184					

Table 5: Gender – one-way ANOVA results (significant results highlighted in yellow, p<.05, two-tailed)

Appendix 5

Age correlation table

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	15	2	.9	1.1	1.1
	16	55	23.8	29.1	30.2
	17	77	33.3	40.7	70.9
	18	27	11.7	14.3	85.2
	19	5	2.2	2.6	87.8
	20	5	2.2	2.6	90.5
	21	6	2.6	3.2	93.7
	22	6	2.6	3.2	96.8
	23	1	.4	.5	97.4
	24	2	.9	1.1	98.4
	25	1	.4	.5	98.9
	28	1	.4	.5	99.5
	30	1	.4	.5	100.0
	Total	189	81.8	100.0	
Missing	Missing	42	18.2		
Total		231	100.0		

Table 6: Age of respondents

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	15–16yrs	57	24.7	30.2	30.2
	17yrs	77	33.3	40.7	70.9
	18yrs	27	11.7	14.3	85.2
	>18yrs	28	12.1	14.8	100.0
	Total	189	81.8	100.0	
Missing	Missing	42	18.2		

Table 7: Age group of respondents

Appendix 6

Age descriptives and ANOVA table

		Sum of Squares	df	Mean Square	F	Sig.
Factor 1: Feeling Limited	Between Groups	2.352	3	.784	1.872	.136
	Within Groups	77.479	185	.419		
	Total	79.831	188			
Factor 2: Making a Difference	Between Groups	3.736	3	1.245	2.786	.042
	Within Groups	82.675	185	.447		
	Total	86.411	188			
Factor 3: Other Priorities	Between Groups	2.977	3	.992	2.281	.081
	Within Groups	80.483	185	.435		
	Total	83.460	188			
Factor 4: Status and Ambition	Between Groups	3.922	3	1.307	2.933	.035
	Within Groups	82.466	185	.446		
	Total	86.388	188			
Factor 5: Family Oriented	Between Groups	2.407	3	.802	1.884	.134
	Within Groups	78.802	185	.426		
	Total	81.209	188			
Q49. Right now, how much does having a career mean to you (where 1 is not a lot and 10 is a lot)?	Between Groups	5.535	3	1.845	.401	.752
	Within Groups	836.557	182	4.596		
	Total	842.091	185			

Table 9: Age – one-way ANOVA results (significant results highlighted in yellow, p<.05 two-tailed)

Appendix 7

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	School	163	70.6	87.6	87.6
	University	23	10.0	12.4	100.0
	Total	186	80.5	100.0	
Missing	Missing	45	19.5		
Total		231	100.0		

Table 11: School system