

**Perceptions of Causes and Long-term Effects
of Academic Underachievement
in High IQ Adults**

A thesis submitted in partial fulfilment of the requirements
for the degree of
Doctor of Philosophy

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Motivation for undertaking this research came from my son's educational experiences. This dissertation is dedicated to him and to all who have followed similar paths.

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We are now both looking forward to getting our lives back on track and to enjoying joint ventures!

ABSTRACT

A great deal is known and has been written about the difficulties that high IQ children can experience in the classroom when their special educational needs are not met. Evidence suggests that these difficulties can result in poor academic performance.

This study is different from the research carried out in this field so far in that it expresses an hitherto unheard adult voice. It does so by examining the causes and the long-term effects of academic underachievement, as perceived by high IQ adults, on reflection.

A mixed quantitative/qualitative methodological approach was used. 158 members of British Mensa, the High IQ Society, completed one semi-structured open ended questionnaire about their perceptions of the causes and long-term effects of their academic underachievement. A second questionnaire was completed by 50 of the previous sample who had revealed that they had reversed their underachievement in adulthood. This highlighted the differences between their educational experiences as children and as adults. It also revealed the impact that their delayed academic achievement had had on their life trajectory. Out of those 50 participants, ten took part in semi-structured one-to-one interviews which allowed for more in-depth enquiry.

The conclusions of the study were that, if not nurtured, an innate ability such as a high IQ can become a disadvantage over time. It suggests that not catering for the special educational needs of high IQ children by not providing the mental stimulation they need is 'intellectual neglect'. Such neglect, like physical and emotional neglect, may affect mental well-being in adulthood. In the study sample, most of the participants' long-term economic and mental health had been negatively affected by their academic underachievement, even when it had been reversed in adulthood. This is an area which seems to have been little researched so far, perhaps because of the difficulty of locating high IQ underachieving adults. Yet, the issues highlighted by the research are of great importance not only to the individuals concerned but also to society.

The desired outcomes of this study are that the dissemination of the results will raise awareness amongst educators and policy makers of the potential negative long-term effects of neglecting high IQ children's intellectual needs. It will also provide a platform for further research.

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CHAPTER 1

Introduction

1 INTRODUCTION

1.1 Introduction

The thesis defended in this dissertation challenges the assumption that individuals who have a high IQ are always at an advantage in their formal education journey. It argues that having a high IQ may sometimes be synonymous with having additional educational needs and that, if those needs are not met, significant academic underachievement can ensue. It seeks to raise awareness amongst educators of the causes of this academic underachievement. It also aims to highlight that, even when it is reversed in adulthood, early academic underachievement has wide-ranging, serious, and mostly negative repercussions, not only on the adult lives of the individuals concerned but also on society.

The purpose of this first chapter is to set the scene, to provide the background for the thesis and to describe the context in which it came to light and developed. It outlines why this research was an original contribution to knowledge. Furthermore, it provides a definition of the words and expressions commonly referred to in the study; it defines the parameters and scope of the research; it mentions some of its limitations and very briefly describes the methodology. Finally, it outlines the structure of the dissertation.

1.2 Background of the research

This study was carried out by a mother in her fifties who had never, thus far, remotely entertained the idea of studying for a PhD. The topic of academic underachievement of high IQ individuals became of great interest to her for personal reasons and research around the topic was carried out, originally very informally, in an attempt to understand a phenomenon that was puzzling her and a source of anxiety and sadness.

Once it became apparent that this field of study generated a great deal of interest to all those to whom it was mentioned and that educators' awareness of the subject needed to be raised, the fruit of this investigation seemed to warrant registration for a doctoral programme. Personal circumstances and a need to understand them were, thus, what led to dedicating five years to undertaking a part-time research programme, the conclusion of which is this dissertation.

The researcher's son has a very high IQ, formally assessed when he was 14 years of age and feeling increasingly disaffected with the education system. This unusually high IQ was deemed by the educational psychologist who assessed him to be the cause of his academic underachievement. In spite of being interested in and knowledgeable about many subject areas; very good at thinking in abstract concepts; literate; numerate; articulate and brought up in a family environment

supportive of education, his academic achievement had often been much below his perceived potential. Having dropped out of university where he was studying cybernetics, been unemployed on and off for three years and feeling very despondent about what the future held for him, he summoned the courage to return to university at the age of 26 to study for a BSc Psychology and is currently in his second year. He was treated for depression during that time and his past negative experiences still have a detrimental effect on his ability to study.

A combination of factors may have played a part in the difficulties he has encountered over the years: parental divorce, becoming gradually estranged from his father, acquiring older and academically successful step-siblings and not being diagnosed until the age of 23 as suffering from dyspraxia. However, the discrepancy between his perceived potential and his actual academic performance seemed to have additional, and possibly more significant, causes. This is what led the researcher a few years ago to read the abundant literature published on academic underachievement in general and, in particular, amongst individuals who have a high IQ.

Critical appraisal of the literature revealed that an ability like a high IQ can become a disadvantage in some circumstances. It also highlighted that there was very little in the literature about the long-term consequences of academic underachievement for

high IQ individuals. Indeed, what happens to them once they have left the compulsory stages of education seems to be little talked or written about. This hitherto unheard adult voice is what was uncovered in this study via questionnaires and interviews.

To have access to this adult voice the researcher contacted Mensa, the High IQ Society, to find out if there might be a few individuals amongst their members who could identify with her son's experiences and, if so, whether some of them would be willing to help understand his predicament better. The British Mensa Research Officer at the time suggested attending the British Mensa annual conference in order to meet members and to write a short article for the British Mensa monthly magazine (Favier-Townsend, 2009a) to appeal for volunteers.

Her assumptions were that there would be many examples of success stories of adults who had struggled in the education system but had done well as adults. She was hoping that their experiences would provide a message of hope.

The level of response to the appeal was unexpected. Within a week of publication of the article, 184 emails and letters were received, all of which containing lengthy accounts of these high IQ individuals' negative educational experiences and how these had affected and were still affecting their personal and professional lives,

mostly negatively. Over the following few weeks a total of 228 expressions of interest were received and then another 24 as a result of subsequent articles in the same magazine (Favier-Townsend, 2009b; Favier-Townsend, 2010; Favier-Townsend, 2011). There were a few success stories but, proportionately, not many.

This is when it became clear that, not only was this topic of great personal interest but it also seemed very puzzling and important to many individuals who had underachieved academically despite their high IQ. The topic also appeared to raise a lot of interest whenever it was mentioned, casually, to a wide range of people who had neither underachieved academically nor had a high IQ. They seemed intrigued by the suggestions, firstly, that high IQ individuals are sometimes at a disadvantage in their education journey and, secondly, that they do not always 'make it' in the end.

Most of the individuals who responded to the article, and later completed the questionnaires and participated in interviews, were offering to provide information about their experiences in the hope that it would help prevent other people from suffering what they had endured.

From this point forwards, investigating further this phenomenon became compelling, not just to satisfy the researcher's own curiosity but also to satisfy that of many.

1.3 Aims of the research

The aims of the research were three-fold:

Firstly, to explore retrospectively with a sample of high IQ adults their experiences of academic underachievement or delayed achievement, as they remembered it, and what they perceived the causes of this phenomenon to be.

Secondly, to investigate the perceived long-term impact of the phenomenon of academic underachievement on various aspects of their life.

Finally, to draw conclusions about what lessons educators, policy-makers and government agencies could learn from the participants' experiences.

1.4 Definitions of important terms relevant to the research

The following terms were used throughout this dissertation and understanding what they meant in this particular context is vital.

1.4.1 High IQ (Intellectual Quotient)

The difficulties in defining intelligence, discussed in the Literature Review Chapter, explain why the term intelligence was purposely not used in this dissertation in relation to the participants' cognitive skills. Indeed, for this study to have validity, it was felt important that the common factor between the participants in the research should be something measurable and that had been measured, hence the use of a high IQ score as the measured element. All participants had an IQ score that was measured via a scientifically recognised and supervised test and which is only shared by the top two per cent of the population (98th percentile), a large deviation from the norm.

It is interesting to note here that most psychologists do not question the choice of IQ testing as a valid measurement of cognitive functioning (Martin et al., 2010; Plucker, 2001). By contrast, educators seem suspicious of it (Gardner, 1993; Resnick, 2008; Lucas and Caxton, 2010; Gardner, 2011). For this reason and to set the research in its context, the meaning and validity of IQ tests scores in general and for predicting academic achievement, in particular, are discussed in the Literature Review Chapter.

1.4.2 Gifted and giftedness

The term gifted was used in this dissertation but only in order for the subject matter to be recognised as linked with the cultural references and literature relating to this concept.

Indeed, the term gifted is seen as ambiguous by the researcher as it has positive connotations that imply advantage and privilege which did not ring true with the experiences of the subjects of this investigation. The expression 'gifted' is commonly used by default for children who are performing exceptionally well in the school system and/or who display a high ability in one or several subjects. This does not always mean, however, that they have the high IQ mentioned above. When used in this dissertation, the terms gifted and giftedness always assumed a formally assessed IQ score in the 98th percentile.

In addition, this study dealt exclusively with intellectual giftedness as opposed to giftedness in music or sport or art, for example, often referred to as 'talent'. Indeed, the traditional IQ tests only assess cognitive functions (Renzulli, 1978; Borland, 1986) and do not take into account other types of intelligences (Sternberg and Grigorenko, 2007; Gardner, 2011) or behavioural characteristics.

Importantly, the vast majority of the literature on giftedness deals with children. This study was different in that it focused on adults and their retrospective view of their childhood. This was different from appraising the experiences of children currently engaged with the education process. In most cases, participants were not aware of their high IQ until long after having left the education system and would not necessarily identify with the label of 'gifted child'. Whilst a high IQ provides the potential for academic achievement, how it is responded to and catered for will determine whether or not it becomes actualised (Cattell et al., 1972; Freeman, 2005; Siaud-Facchin*, 2008). When this potential is not actualised, it is hard for individuals to believe that they have a high IQ even once it has been measured by a professionally administered test.

1.4.3 Mensa and Mensans

Mensa, the High IQ society, is an international organisation with active branches in over 40 countries and members in over 100 countries. As quoted on their website:

"Mensa was founded in England in 1946 by Roland Berrill, a barrister, and Dr Lance Ware, a scientist and lawyer. They had the idea of forming a society for bright people, the only qualification for membership of which was a high IQ. The original aims were, as they are today, to create a society that is non-political and free from all racial or religious distinctions".

The word 'mensa' is not an acronym and, therefore is not written in capital letters. It means 'table' in Latin. Mensa is described by its founders as a round-table society, where race, colour, creed, national origin, age, politics, educational or social background are irrelevant. It acts as a virtual table around which members can participate in intellectual debate and various social activities.

As stated on their web site, the society's official objectives are:

“to provide a stimulating intellectual and social environment for its members, to identify and foster human intelligence for the benefit of humanity, to encourage research into the nature, characteristics, and uses of intelligence. The Society welcomes people from every walk of life whose IQ is in the top two per cent of the population, with the objective of enjoying each other's company and participating in a wide range of social and cultural activities”.

Once they have passed the entry test or proven via an officially recognised testing method that their IQ is in the 98th percentile, individuals are offered the opportunity to join the Society for a modest yearly financial contribution. They are then referred to as 'Mensans'.

It is fully recognised that Mensans are not necessarily representative of the total two per cent of the population that has an IQ in the 98th percentile. There are far more high IQ individuals who are not members of Mensa than there are Mensans and the reasons for this choice of sample are discussed further in the Methodology Chapter.

1.4.4 Academic Achievement or Attainment or Performance

The word 'academic' in this study referred to the formal education domain and the words 'achievement' and 'attainment' to the acquisition of formal academic qualifications.

It is fully acknowledged that the concept of academic achievement is subjective and relative. The Oxford English Dictionary's definition of achievement is "a thing done successfully with effort, skill and courage". This implies that assessment of what an individual has achieved is in direct relation with how much effort was required to reach a particular goal. Two individuals can obtain the same academic qualification but, depending on their particular circumstances, one may be considered to have achieved a great deal and the other, not. In addition, whether someone feels that they have 'achieved' or not will depend on their own perception of the effort required to reach a goal. For example, gifted children who obtain high marks without having to make any effort do not consider that they have 'achieved'.

In the school system, achievement is related to expectations of reaching certain targets at various stages of the education process via public examinations or continuous assessment. These targets are usually set by external agents and often following government guide lines.

In this study, academic achievement was based on performance in public examinations and attainment of qualifications relative to the student's cognitive ability. The use of formal academic qualifications as a way of measuring academic achievement was selected so that data could be compared on the basis of parameters that were measurable and that had been officially measured. In order to be more focused, the study did not take into account achievement outside the formal education sphere if it had not been sanctioned by academic qualifications.

1.4.5 Academic underachievement

As discussed in the Literature Review Chapter, academic underachievement is defined for the purpose of this research as a discrepancy between a child's school performance in terms of achievement in public examinations, and some index of the child's ability, such as an IQ score (Reis, 2000; Delisle and Berger, 1990).

1.4.6 Delayed or late academic achievement

In this dissertation the terms 'delayed' academic achievement and 'late' academic achievement were used interchangeably and those whose academic achievement was delayed were sometimes referred to as late achievers.

Delayed or late academic achievement in this context was deemed to have occurred when there had been reversal of academic underachievement through obtaining academic qualifications at an age which is beyond the 'usual' age at which they are acquired in the UK i.e. 16 years old for GCSEs, 18 years for 'A' levels and 22 years of age for an undergraduate degree.

1.4.7 Adults

This term 'adult' or 'mature' student was used to refer to individuals who were beyond the standard age in the UK for studying at school (18 years old) or full-time undergraduate study (up to about 22 years old). However, because this retrospective study attempted to find out about the long-term effects of academic underachievement, participants included in the research were purposely over thirty years of age.

It is important to mention here that although the academic underachievement of the subjects being studied occurred a long time ago, the issues that were relevant to them are still very current. Two Office for Standards in Education (OFSTED) reports published in 2009 and 2013 (see appendices 14 and 15) highlighted the fact that the 'most able children today are let down by the state school system'. Ofsted is a government body and may provide information that is not entirely objective, but examples of problems currently experienced by high IQ children in the education system abound from other sources, as shown in appendix 13.

1.4.8 Causes

These are the factors leading to academic underachievement or delayed academic achievement, as perceived by the participants, on reflection.

1.4.9 Long-term effects

This refers to the participants' perception of the impact that their academic underachievement or delayed academic achievement has had in adulthood on their personal and professional lives and, by extension, on society at large.

1.4.10 Perceptions

No research such as this can provide the unassailable truth. Because the adults in this study were reflecting on their childhood, they were relying on distant memories which may or may not be factually accurate. However, memories of the feelings engendered in the past and engendered now by their experiences of formal education appeared to be strong enough for all participants to be significant and, therefore, worthy of note (Martin et al., 2010). Their analysis of the situations they described, which was based on remembered facts and feelings, is what amounted to their 'perceptions'. As discussed in the Methodology Chapter, not only could the motivations of participants in the study be subjective (by volunteering to take part in this study participants may have had an agenda and an axe to grind with the education system, for example) but the researcher's own perceptions and assumptions were also an integral part at the start of the study (see appendix 10).

1.4.11 Special educational needs

Although some suggestions were made by the participants and the researcher as to ways of helping gifted children achieve their academic potential, this dissertation did not attempt to solve the issues of classification of special educational needs or allocation of funding as the researcher was not qualified to do so. Although she suspects that other disabilities and difficulties may be considered to be more worthy

of support, she hopes that this research will highlight the case of gifted children so that experts can take note and promote their case on her behalf.

Assumptions were made on the basis of the Organisation for Economic Cooperation and Development (OECD)'s categories (Norwich, 2013:33) which refer to three categories of special educational needs: Disabilities, Difficulties and Disadvantages. All these are acknowledged as requiring extra support through additional resources, even though the latter vary from country to country. From the description of these categories it was assumed for this research that, if identified as a special educational need, a high IQ would come under the 'Difficulties' category.

In addition and with reference to the classification used for School Action Plus (DfES, 2005), the area of need was identified as that of cognition and learning needs – either Specific Learning Difficulty (SpLD) or Moderate Learning Difficulty (MLD).

Whenever the term 'special educational needs' was used in this dissertation it was with reference to the above-mentioned categories.

1.5 Sources of bias inherent to the research

These are discussed briefly in Chapter Three (3.6) and in greater detail in Chapter Eight (8.3) and appendix 10. They included, at the start of the investigation, the

emotional involvement of the researcher, her passion for and vested interest in the topic, her assumptions, her own educational experience and upbringing and her cultural background – all of which influenced the design of the study. Through sharing research results and findings as this doctoral journey unfolded, the above sources of bias became apparent and there was therefore a deliberate attempt at attenuating them as much as possible.

The aim of the investigation was to provide as objective an account as possible of the discoveries made through what the participants in the study revealed in the lengthy questionnaires they completed and the interviews in which they took part. Because so much was revealed in the process and because new elements that were not included in the original assumptions and arguments kept cropping up, there was a need to clearly state the limits and the scope of the study.

1.6 Scope of the study

The main reason for the limitations of the scope of the research was the fact that this was undertaken for the specific purpose of writing a doctoral dissertation. Many other aspects could have been explored in-depth such as the differences in terms of academic performance between males and females, the effects of the changing political context over time of education in the UK on provision for gifted children or the problems experienced by individuals who had a high IQ as well as some other

form of disability, learning difficulty or disadvantage. Alternatively, some aspects could have been examined under a different angle - for example, high IQ individuals who had not achieved academically but had achieved in non-academic spheres or the point of view of teachers, or the experience of parents of gifted children.

The scope of this research having to be limited for practical reasons pointed to the fact that the phenomenon of academic underachievement amongst high IQ individuals is multi-faceted and could provide a platform for extensive future research on a number of other aspects relating to this topic. However, for now, they could only remain suggestions for future research, as explained in greater detail in Chapter Eight (8.3).

1.7 Brief description of the methodology

In order to answer the research question it was necessary to use a mixed methodology. A quantitative research paradigm was needed to explore and measure how prevalent various aspects of the participants' experiences were. A qualitative research paradigm was then needed in order to analyse, understand and interpret the results and findings.

In term of methods, it used a mixture of structured questionnaires with open-ended questions: one set of 158 and another set of 50, devised as a result of the first one

and collected 18 months later. Following these, ten one-to-one semi-structured interviews were conducted.

The data were analysed using a thematic approach. The questionnaires were used to collect quantitative data for statistical purposes and results were translated into charts for ease of comparison. However, as the questionnaires were open-ended, qualitative descriptions of the participants' experiences and opinions were extracted in the form of quotations to illustrate the generalisations drawn from the quantitative data. These provided the impetus for a move towards an interpretivist paradigm with one-to-one interviews leading to the construction of personal profiles. Those, focused on individual cases, allowed for more in-depth enquiry and represented detailed examples of the argument.

It is important to note that the results and findings were specific to the target population from whom data was collected and, as such, their retrospective perceptions may not be universally applied to educational contexts in general.

1.8 Originality and significance of the research

There have been several longitudinal studies which have examined the life of gifted children and their trajectories into adulthood (Terman, 1947; Freeman, 1991; Freeman, 2005; Freeman 2010). These have shown that, when they had been

identified early as having a high IQ, some of these individuals had flourished and others not. The differences between the two outcomes appeared to be due mostly to the differences in their formal and informal educational journeys (Tolan, 1994; Streznewski*, 1999; Freeman, 2005).

However, this research is different from the above for two reasons. Firstly, in the vast majority of cases, the subjects of this investigation were not identified as having a high IQ until after they had left the education system or, if they were identified, there had been no special provision made to cater for their differences. This group of individuals has not been the subject of many studies so far probably because, firstly, it is difficult to locate them and, secondly, because children are usually labelled as gifted only when they are high achievers (Webb, 2014).

Secondly, it was a retrospective study. The subjects were not being observed coping or not coping with their giftedness whilst being in the process of being educated. They were asked to reflect with hindsight on their experiences of a phenomenon which took place during their schooling many years previously. The vast majority of studies on giftedness so far has been carried out on children rather than adults (Falck, 2013; Nauta and Ronner, 2013; Webb, 2014).

This study highlighted that high IQ individuals have special educational needs and revealed that, unless these are identified, acknowledged and catered for within the school setting, the long-term prospects of these individuals can be poor. Indeed, the research identified a potential link between a high IQ and insufficient intellectual stimulation in childhood and adolescence and mental health problems such as, for example, depression in adulthood. Far from providing the optimistic depiction of the triumph of high IQ over academic underachievement the researcher had hoped for at the outset, the research uncovered a picture that was not as reassuring as expected. Although it demonstrated hope for academic achievement to be gained in later life, it highlighted that it was by no means the case for many of the respondents.

For this reason it was a significant study despite its limitations and made an original contribution to knowledge. This new knowledge has been and will be further disseminated in the hope that it provides useful new insights to others such as educators, special education needs specialists and government agencies. It will also be of interest to individuals who can identify with the subjects of this study or people who share their lives, including parents who suspect that their underachieving child may have a high IQ.

All the areas that were not touched upon in this dissertation, because of the limitations in terms of resources, time and number of words available, would also be

worth investigating and could make the subject of several more doctoral studies, as suggested in Chapter Eight (8.3).

Finally, undertaking this research and writing this dissertation were significant for its author who developed not only as an increasingly confident researcher but also as an individual. Interesting insights were uncovered about the participants of this study and the subject matter but some also about herself. The journey to the final destination took unexpected twists and turns and, for this reason, was at times frustrating but always compelling (see appendix 10).

1.9 Structure of the dissertation

This dissertation followed a conventional pattern in terms of structure. It highlighted what research has already been carried out in the fields of IQ testing, giftedness and academic underachievement and identified a gap in the literature: how little seemed to be known or published about underachieving high IQ adults.

Having established some parameters and the scope of the study, it then set out to fill this gap. In order to do so, a methodology and research design were selected, which led to the matter being investigated using a mixed methodological approach and different methods of data collection. A reflection on the research process itself was also an integral part of the design - see Chapter Three (3.7) and appendix 10.

Finally, the results and findings were presented and interpreted and conclusions drawn. The eight chapters of this dissertation provide the road map of the journey undertaken to explore the varied avenues leading to the final (or maybe still temporary) destination.

1.10 Conclusion

In conclusion, although this chapter only gave a brief overview of the contents of the dissertation, it is a vital piece of the jigsaw puzzle. It highlighted what was important to know about the contextual framework of the study in order for the reader to be able to appreciate from the outset its particular perspective and scope.

The topic was researched and the dissertation written by a mother who happens to have spent over 30 years of her working life in the field of higher education. Moving in circles where research is common place, framing this study within the context of doctoral studies seemed a natural thing to do.

Understanding the causes and long-term effects of academic underachievement in high IQ individuals was gained through surveying and talking to individuals participating in this study who have followed a path similar to her son's. However, being a few years ahead of him in terms of their experience they had reflected on

their journey into adulthood. This had enabled them to reflect, with hindsight, on their perceptions of both the causes and the long-term impact of their underachievement or delayed academic achievement.

This type of study does not appear to have been undertaken before. Some findings confirmed those revealed in the literature, but there was a gap in the literature which this research started to fill. There were also several unexpected discoveries along the way – all of which revealed by the end of the journey.

To summarise, this overview of the dissertation placed the study in its context, explained why it is an important piece of work, for both the author and others. It demonstrated why it needed to be done, briefly highlighted its limitations, the issues raised by the research process and the ways in which the topic was presented in the various chapters, the next one of which is the Literature Review Chapter.

CHAPTER 2

Literature Review

2 LITERATURE REVIEW

2.1 Introduction

The aim of the research was to find out why individuals who have a high IQ and who, because of it, are expected to perform well in an academic setting (selection tests for admissions to American Ivy League universities, for example, are IQ tests (Stanovich, 2009), sometimes perform considerably below their formally assessed cognitive ability. The purpose was also to investigate the long-term effects of academic underachievement or delayed academic achievement on their adult life.

This chapter is divided into two parts. In the first part theories surrounding the concepts of intelligence and IQ testing are reviewed. Indeed, it seemed important to assess the relationship between the two, especially as it appeared to cause a great deal of controversy amongst educators with whom this research was informally discussed. It then examines the concepts of the personality and behaviour traits commonly encountered in high IQ individuals and aims to assess the possible link between high IQ and a 'way of being' that may or may not lead to academic underachievement.

The second part concentrates firstly on the specific ways in which high IQ individuals tend to process information and learn, how their academic underachievement manifests itself and what the causes of this phenomenon may be. It then attempts to review what is known about high IQ adults who describe themselves as early underachievers and the long-term consequences of this early underachievement on their adult life.

Two types of literature were used in this dissertation. The first was written within the context of pure academic research and the second by (mostly currently) practising psychologists and educators eminent in their field, within the framework of their professional observations and experience. In order to differentiate between the two types, the latter is indicated by an asterisk (*) after the name of the author throughout.

In addition, the literature deliberately spans over a century or so. As this research is a retrospective study, awareness of the research undertaken at the time of the participants' schooling seemed important. To this end, the survey of the literature includes research from several decades ago. Indeed, it demonstrates that the problems experienced by high IQ individuals underachieving academically have been well-documented for almost that length of time. It highlights clearly that causes and cures of the phenomenon are well-known and have been for decades.

The literature review forms the basis upon which the research design was built, as discussed in Chapter Three, in order to find a way of listening to the adult voice that is not heard in this review of the existing literature. Indeed, assessing the contribution that other authors have made to this research area helped place the topic in its broader context. It also made it possible to identify the gap that could lead to making an original contribution to new knowledge in this field. As is demonstrated in this literature review, there is a wealth of academic material on the subject of high IQ children and the difficulties they can experience in the school system. Yet, there appears to have been little discussion so far regarding the consequences in adulthood of these difficulties.

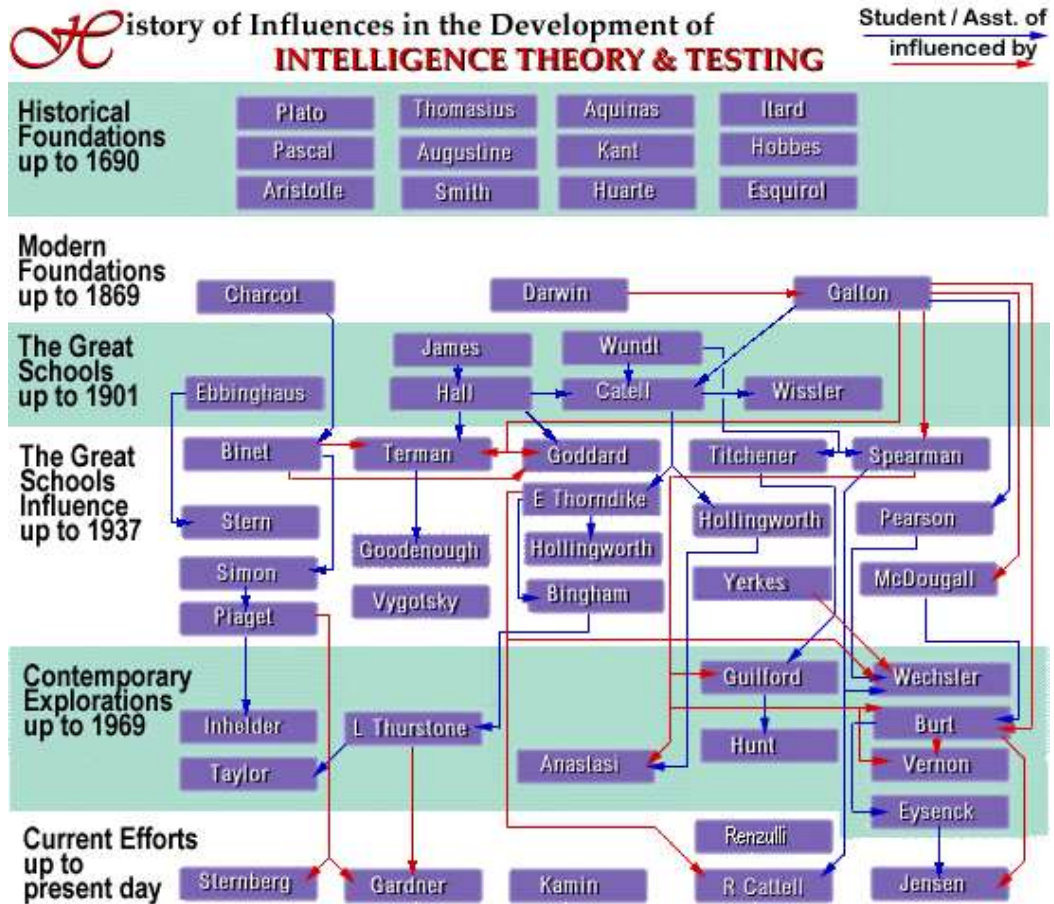
2.2 Part 1 - Intelligence testing, IQ tests and high IQ individuals

2.2.1 Definitions and measurement of intelligence: old and new theories

The debate about what intelligence is has been going on for over two thousand years, as can be witnessed in the works of the Greek philosophers, Aristotle and Plato. Yet, to date, there seems to be no universally accepted definition of intelligence. Can intelligence be described as one broad ability or several systems of autonomous abilities? Can intelligence be conceived as an attribute of the brain,

a peculiarity of behaviour, a collection of skills and knowledge or, indeed, a combination of all these? Theories on the subject abound.

The illustration by Plucker (1998) in Figure 1 below shows the many influential individuals who, over the centuries, have developed theories of intelligence and intelligence testing. All of these theories have been significant in some way but, as this research project focuses on the relationship between IQ test scores and academic performance, only those individuals whose work is particularly relevant to this central issue are discussed here.



Original map created by Plucker, J. Copyright © 1998

Figure 1: History of influences in the development of intelligence theory and testing

IQ tests belong to the domain of psychological testing and the science which forms the basis of psychological testing is called psychometrics. This field relies on testing behaviour (usually observations of an individual performing tasks) so that psychological constructs, such as emotional and cognitive functioning can be assessed and provide mean scores. These scores are then plotted into statistical

tables that allow the comparison of the behaviour of the individual tested to that of a norm group.

The first individual IQ tests were devised by the French psychologist, Binet (1903). They were set at a given level and could be solved by any average child of the same age. These age-graded tasks gave birth to the concept of mental age.

Binet's ideas were then taken up by Terman (1916), an American cognitive psychologist from Stanford University, who refined the tests which then became known as the Stanford-Binet intelligence tests. Early critics of the above such as Lippmann (1922) felt that the questions in the tests were superficial, culturally biased and that determining a person's potential with a brief oral and pen and paper measure was inappropriate. They were also judged inadequate because they had an inherent cultural bias which could affect results since, as demonstrated by Kleinfeld (1971), different cultures value different abilities.

A new concept was then introduced by Spearman (1923), which consisted of analysing the relationship between experimental intelligence tests using factor analysis. He called the first factor *g* for General Ability - the main driving force of his analysis - which provided a major theoretical platform for several subsequent approaches to intelligence testing.

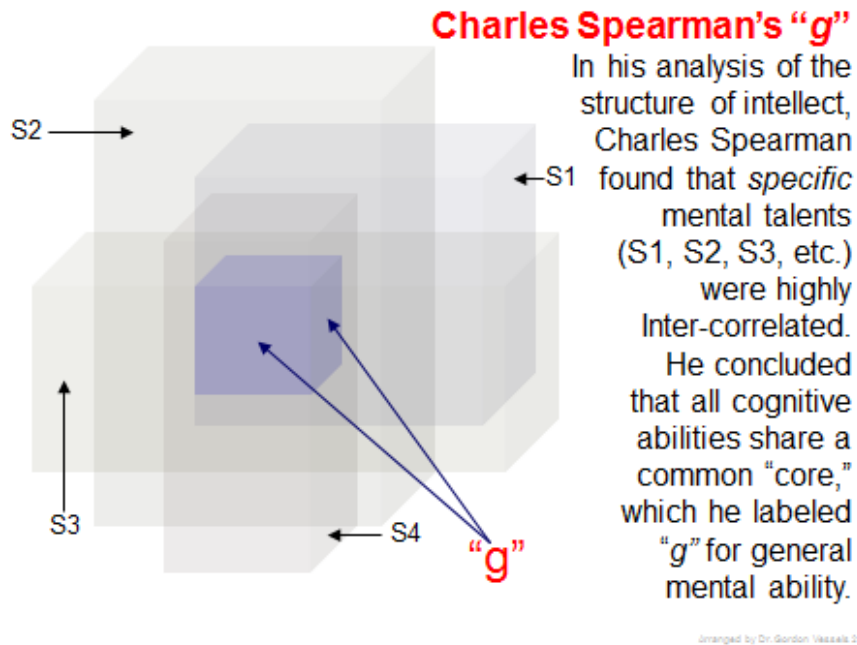


Figure 2: Charles Spearman's "g"

However, Spearman was also a eugenicist and suggested that only people whose *g* exceeded a certain level should have voting rights or be allowed to procreate. This approach made his theories very unpopular in many circles and *g* remains controversial today. Yet, this has remained outstandingly the most practised concept of giftedness in the world, meaning that children are described as gifted if their *g* or Intelligence Quotient (IQ) is above a designated cut-off point (Freeman, 2005).

Similarly, theories proposed by Jensen (1969) and Eysenck (1971) which claimed that the differences in intelligence test scores between races might have genetic origins were much criticised. Although Eysenck (1998) later moderated his views and proposed that it was also important to take into account environmental influences, his theory has still not been accepted by many (McLoughlin, 2000).

By contrast, one way of measuring intelligence that is still widely used today is the instrument designed by Wechsler (1939) who argued that the emphasis of scales used by Binet was too verbal for use with adults. As a result, he devised an instrument that encompassed sub-tests to measure verbal as well as non-verbal abilities. He designed the WAIS (Wechsler Adult Intelligence Scale) and a few years later adapted it so that it could be used with children, renaming it WISC (Wechsler Intelligence Scale for Children) (Wechsler, 1949). This scale has been revised several times and its present day versions are the WAIS-IV and WISC IV, thus demonstrating that Wechsler's theories have endured and become standards in psychological testing.

Further research into the concept of intelligence led to new theories being developed during the 1960s. Horn and Cattell (1966), in particular, made an important distinction between two types of intelligence. The first which they coined 'fluid' intelligence, is primary reasoning ability and the sort of cognitive functioning that

helps individuals to reason in the abstract and, for example, see relationships between letter and number series. The second which they refer to as ‘crystallised’ intelligence relates to acquired factual knowledge and skills.

A further contribution to intelligence theory was made by Sternberg (1985) and involved incorporating practical knowledge in the redefinition of intelligence. To this end he designed a test of Practical Intelligence (later renamed Successful Intelligence (Sternberg and Grigorenko, 2007)) because he felt that it is not in the classroom that intelligence operates but in real life. What Sternberg (1985) coined a Triarchic Theory of Intelligence is illustrated in Figure 3 below.

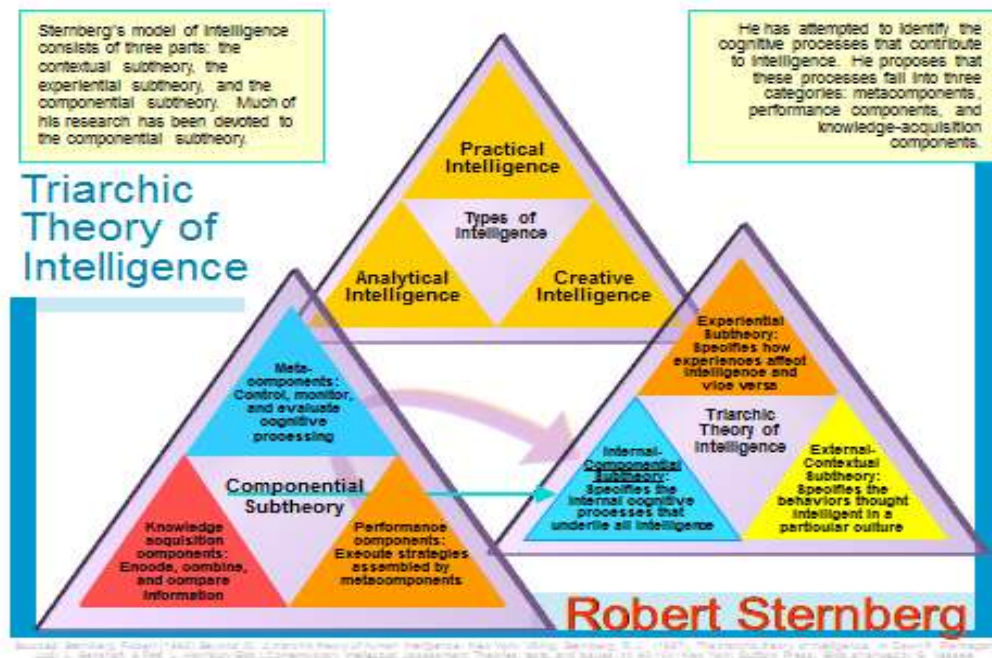


Figure 3: A Triarchic Theory of Intelligence, Sternberg (1985: 45)

The theories developed by Sternberg had an influence on cognitive science and resulted in conventional methods of evaluating an individual's intelligence being questioned yet again.

At roughly the same time as the above, Gardner (1993) developed a theory of multiple intelligences which supports the notion that intelligence comes in different forms. Gardner proposed eight forms of intelligence - as shown below - with a ninth one added later, coined 'spiritual intelligence' (Gardner, 2011).

Type of Intelligence	Description
Linguistic	Word smart
Logical/mathematical	Number reasoning smart
Spatial	Picture smart
Bodily-Kinaesthetic	Body smart
Musical	Music smart
Interpersonal	People smart
Intrapersonal	Self- smart
Naturalist	Nature smart

Figure 4: Eight Intelligences, Gardner (1983)

According to Freeman (2005), although the concept has been popular, the evidence is contentious. Indeed, critics of Gardner such as Collins* (1998) and Gottfredson (2004) argue that not all these things are intelligence and could be described better as capacities that are secondary or even tertiary to the *g* factor. Indeed, Gardner has not provided a tool that would make it easy or even possible to measure those eight intelligences.

More recently, however, a few educationalists acknowledge Gardner's work as playing a useful role in "broadening the scope of the discussion about intelligence" (Lucas and Caxton, 2010:18). Acknowledging the work of Costa and Kallick (2000) which identified sixteen types of intelligence, they also propose eight types of intelligence. They make numerous suggestions as to how real-world intelligence is not related to IQ and can be fostered and developed in all children through new approaches to teaching. However, like Gardner, they do not explain how these types of intelligence can be measured.

Similarly, Resnick (2008) suggests that intelligence can be described as the sum of one's habits of mind and proposes that what determines an intelligent approach to life is behaviour rather than IQ but makes no suggestions as to how this can be measured numerically.

The above theories about multiple intelligences have proved controversial because, as Visser et al., (2006) and Frazier and Youngstrom (2007) argue, the tests devised to measure them - when they do exist – provide an ever-increasing array of composite scores of questionable clinical or scientific value.

This is why, they claim, educational psychologists at the beginning of the 21st century are using the IQ testing practices of the mid-20th century such as the Wechsler tests, as they estimate them to be the more accurate to date for assessing an individual's cognitive functioning.

Numerous studies of mono-zygotic twins separated at birth and reunited in adulthood (Plomin et al., (1994), Devlin et al., 1997; Bouchard, 1998; Dickens et al., 2001; Polderman et al., 2006; Visscher et al., 2008) have shown that, regardless of the nature of their upbringing, they had the same IQ score. The different socio-economic and familial environment in which they grew up did not seem to have had an influence on their respective IQ score. It is, thus, still argued today that, although not perfect, commonly used tests like Wechsler's and Cattell's tend to measure an individual's cognitive functioning accurately and consistently (Konold and Canivez (2010).

In addition, scores obtained via those IQ tests seem to correlate closely with educational attainment (Siaud-Facchin*, 2002; Deary et al., 2007; Renucci* and Colomb*, 2008).

In conclusion, there is still no consensus as to what intelligence is. Despite over one hundred years of research on the subject and theory and practice having evolved during the 20th century and early 21st century, its measurement via IQ testing tests is still considered by some as unreliable. Anecdotal evidence shows that there is still a great deal of reluctance amongst teachers to rely on those tests in order to assess a child's ability (Freeman, 2010).

With this in mind, one can sum up the premise on which this research is based:

"Intelligence tests are not perfect. They still measure potential inaccurately in the culturally deprived, or in those from cultures different from that in which the test was standardised, but they are less unfair than anything else. They are only a rough guide, but many experiments have shown that they are better and less biased than unaided, human judgment. They are better than guess work, more efficient than trial and error, and they are improving all the time. They were invented as an instrument of social justice, a way of

*penetrating to the central capacity of a person despite his lack of education”
(Serebriakoff, 1998:8).*

The above statement will particularly resonate with individuals who do not perform well in an educational setting and whose ability, as a result, can be misjudged by their teachers until an IQ test reveals that their cognitive functioning is actually very superior to the ‘norm’. The next section will explain what IQ tests attempt to measure.

2.2.2 IQ tests: what do they measure?

*“Intelligence is a factor which varies between individuals and is associated with a general level of ability displayed in performing a wide variety of different tasks. It is the capacity to detect, store, sort and process signals generated in the universe and transduce them into an optimal output pattern of instructions. In this sense, intelligence is therefore measurable with reasonable accuracy in the same way as other scientific concepts such as temperature, gravity and radiation were measured accurately long before the meaning and significance of the measurements were properly understood”
(Serebriakoff, 1998 ibid:11).*

It is worth noting here that there is a difference between achievement tests and intelligence tests. Reynolds et al., (2006) posit that the former assess students' knowledge or skills in a particular domain. By contrast, the latter are designed to measure the cognitive skills, abilities, and knowledge that individuals have accumulated as the result of their overall life experiences as well as those used for problem-solving. Achievement tests are usually administered routinely by teachers to assess learning and Cognitive Abilities Test (CATs) are used in some schools with groups of children to 'stream' them into groups of similar ability. IQ tests are individual tests that should be administered by a trained and experienced educational psychologist, as observing the individual whilst taking the test is part of the assessment. The IQ test most commonly used in the education context today is the WISC-IV. It is one of the longest of such intellectual assessments and takes approximately two to three hours to administer (Reynolds et al., 2006).

One could argue that if teachers do not understand the difference between achievement tests, Cognitive Abilities Tests and IQ tests, they may make inaccurate assumptions about their pupils' abilities. This lack of understanding of the concept of IQ testing could therefore lead to children who have a high IQ but do not perform well to be misjudged about their abilities.

The WISC-IV test measures the following:

- numerical reasoning ability, mental manipulation, concentration and auditory memory;
- the ability to analyse and synthesise abstract visual stimuli, nonverbal concept formation and perceptual organisation;
- processing speed, short-term visual attention, visual scanning, visual memory, concentration, mental flexibility and vigilance;
- short-term auditory memory (digits backwards), attention, mental manipulation;
- the general fund of knowledge;
- short-term memory, sequencing, mental manipulation and attention;
- fluid intelligence (language-free and culture-fair measure of intelligence);
- visual scanning and organisation as well as attention to essential details;
- nonverbal abstract reasoning and categorisation;
- verbal comprehension, reasoning, concept formation, abstraction, word knowledge verbal conceptualisation and the ability to apply practical information.

As different IQ tests were developed, each was given its own scoring system. In order to allow comparison between different IQ tests, the scores are converted to percentiles. Mensa, the High IQ Society, offers membership to anyone whose IQ score places them within the top two per cent of the population (98th percentile), no

matter which approved official test was used. The 98th-100th percentile corresponds to the following scores:

- WAIS IV or WISC IV– 132 or above
- Cattell III B - 148 or above

Depending on which test is used scores will have a different value.

For example, according to the WAIS IV OR WISC IV, IQ is classified as:

- Over 130 - Very superior
- 120 - 129 – Superior
- 110 - 119 - High average
- 90 - 109 – Average
- 80 - 89 - Low average
- 70 - 79 – Borderline
- Under 70 - Extremely low/intellectually deficient

According to the Cattell III B scale, IQ is classified as:

- Over 160 - Genius Level
- 140 - 159 - Highly Intelligent
- 120 - 139 - Above Average
- 100 - 119 – Average
- 90 - 99 - Below Average

The skills measured by IQ tests have been proven in many studies to be strongly related to academic achievement (McCall, 1977; Pyryt, 1996; Deary, 2000). They are commonly used, for example, as selection criteria for entry to Ivy League universities in the USA. “The vaunted SAT tests have undergone many changes (from Scholastic Achievement Test to Scholastic Aptitude Test and currently Scholastic Assessment Test to simply the letters SAT) in order to disguise one basic fact that has remained constant throughout these changes: it is a stand-in for an IQ test” (Stanovich, 2009: 3). The 11-Plus or the public school entrance exams in the UK also tests the types of skills measured by IQ tests such as the Wechsler and Cattell tests (Frey and Detterman, 2004).

As demonstrated by the way Mensa selects its members - who have to take a 2 ½ hour supervised test - what is significant in the above IQ tests is the standard deviation.

The graph below represents simply what standard deviation means in terms of IQ score distribution.

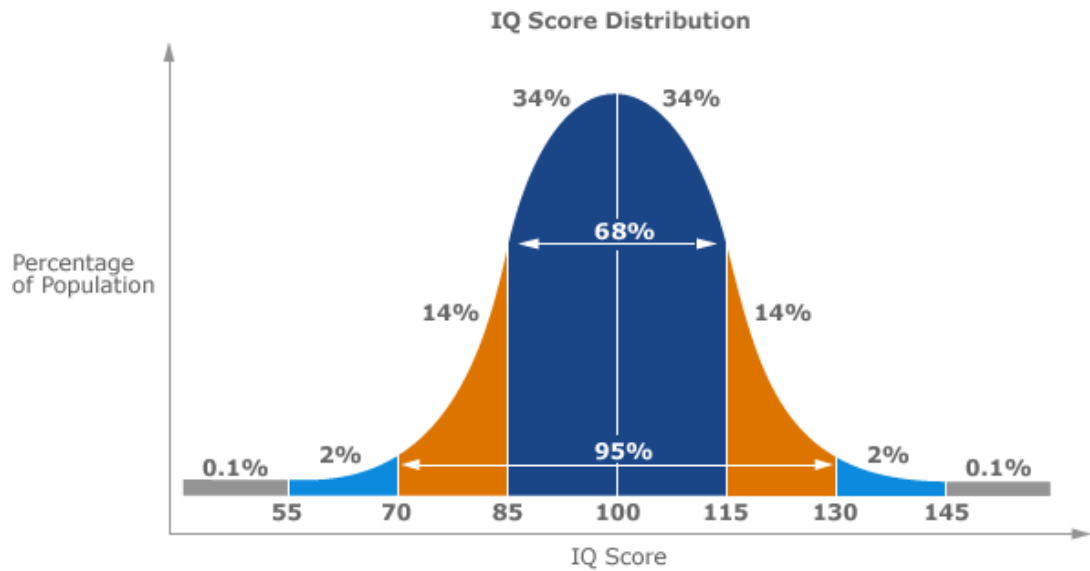


Figure 5: IQ Score Distribution - The Bell Curve

The IQ scores used on the horizontal axis are those of the Wechsler test for adults.

One standard deviation away from the mean (100) in either direction on the horizontal axis accounts for 68% of the people in this group. Two standard deviations away from the mean account for roughly 95% of the population and three standard deviations account for 99% of the population. In other words, 68% of the population score within 15 points above or below 100 on all standardised norm reference tests. The high IQ individuals that this research was about are represented by the light blue and grey areas on the extreme right hand side of the graph, i.e. their IQ score (whatever test was used) placed them in the top two per cent of the population – a significant deviation from the norm.

As Neisser et al. (1996) report, it is extremely important to rely on standard deviation as a way of measuring IQ by comparing with others within a similar time frame rather than use an IQ score on its own with no point of reference. Indeed, research carried out by Flynn (1987) and Neisser (1998) suggests that, worldwide, IQ scores appear to have been rising overall by three points a decade for the last few decades. This phenomenon, referred to as the Flynn Effect, relates to the increase in intelligence test scores measured in many parts of the world from the 1930s to the present day. Flynn (1987) posits that this is due to improved education - children now spend about 14 years on average in school - the increasing familiarity with the tests, development of technology which challenges the brain in new ways and for many hours, improved nutrition and health and other environmental factors (the latter being the same factors that have caused standard height to rise). However, more recent research by Flynn (2009) shows that for the period 1980-2008 the average score of 14-year olds in the UK declined by 6 points - a phenomenon attributed to the computer culture which has reduced the amount of time pupils spend reading books as well as to the tendency of teachers towards having to teach to the test.

For this reason IQ tests scores can only be meaningful if they take into account variations such as the above and highlight what percentage of the population obtained the same score within the same time frame.

If one assumes that the Wechsler and Cattell tests measure cognitive functioning fairly accurately, and they are relied on as a way of assessing to what extent someone is likely to be suited for academic study or not, one must also question why some individuals who have a high IQ score do not fulfil the promise given by the IQ test.

2.2.3 IQ tests: what do they miss?

Siaud-Facchin* (2002) posits that an IQ score does not provide an absolute quantitative measure of intelligence but a statistical expression of cognitive functioning. She describes an IQ score as the product of intelligence and argues that it is more of a qualitative measure than a quantitative one. The tests are designed to reveal the ways in which the brain processes information, not how much it processes, although she also reports that speed is an important factor of the way in which the brain functions and that it is also measured in IQ tests.

As mentioned previously, critics of standardised intelligence tests such as Sternberg (1985) and Gardner (2011) do not contest the fact that IQ tests do measure accurately elements relating to the cognitive domain. However, they argue that IQ tests miss crucial non-cognitive elements which impact on personality, such as

emotion, empathy and interpersonal skills. These are indeed qualities that may contribute to academic underachievement.

Stanovich and West (2014) and Fox (2014) claim that IQ tests do not assess the skills that are associated with good thinking such as judgment and decision-making and which are crucial to real-world behaviour. They argue that “Although most people would say that the ability to think rationally is a clear sign of a superior intellect, standard IQ tests devote no section to rational thinking as cognitive scientists would define the term” (Stanovich and West, 2014:80).

Stoeger (2006) and Ziegler et al. (2012) also propose that an IQ score cannot be used as a predictor of school performance and so do Deary et al. (2007) when they report the findings of Petrill and Wilkerson (2000). Their research concluded that both genetics and environmental factors influence intelligence and educational achievement but that, whilst genetics are important in the correlation between them, environment is what determines discrepancies between intelligence and educational attainments. Plomin and Haworth (2009) came to similar conclusions. Batchold (1969), Carr et al. (1991) and Cutrona et al. (1994) also report that factors such as personality traits, school attendance, parental support, motivation, teaching quality and school ethos all have a substantial impact on educational attainment.

Indeed, complementary research by Petrides et al. (2004) and Laidra et al. (2007) has also shown that educational attainment is very much closely related to environmental factors and that, although psychometric IQ testing is a beneficial predictive tool, it alone is not sufficient for predicting academic achievement.

Similarly, a longitudinal study conducted over 25 years and concluded in Poland by Firkowska-Mankiewicz (2002) which aimed at assessing the impact of intellectual functioning on educational, occupational and economic attainment in adult life drew similar conclusions. The analysis of the findings showed that, although early measured IQ was a relatively good predictor of attainment, its environmental correlates were also important factors.

In conclusion, there seems to be agreement as to the fact that someone with a high IQ is more likely to perform well academically. However, the debate still continues as to whether IQ is truly an accurate predictor of future academic achievement. So does the debate about the extent to which personality traits and environmental factors, for example, also play a significant role in determining achievement or underachievement. This could provide some explanation for the differences between high achieving high IQ individuals and low achieving high IQ individuals. It could also point to the fact that it is a mistake to think that having a high IQ is a guarantee of success in school or in the adult world, as will be discussed later.

2.2.4 Personality and behaviour traits commonly encountered in high IQ individuals

Since it is almost universally agreed that IQ measurements give an indication as to a person's potential for cognitive development and it is recognised that environmental factors are crucial for this potential to be realised, one would assume that it would be advantageous for schools to identify children with high potential. It would also seem a good thing to do this systematically and, once identified, to provide the environment that will help them achieve their best.

First of all, it is worth mentioning that, according to Siaud-Facchin* (2008) and Guénolet et al. (2013), recent developments in psychotherapy and child psychology have heightened the need for understanding the types of difficulties encountered by exceptionally bright children whose specific needs are not catered for in the education system.

Secondly, Siaud-Facchin* (2002) suggests that the progress of neuroscience and functional imaging such as PET (Positron Emission Tomography) and MRI (Magnetic Resonance Imaging) technologies which make it possible to see how the brain functions in real time by measuring neuronal activity, have led to a better understanding of how differently a high IQ person's brain works. Greenfield (2013)

concedes that the relationship between brain activity and brain function is not straightforward: circuits within the brain perform functions rather than behaviours and fMRI (functional Magnetic Resonance Imaging) machines - which are still too slow to capture many neural responses - measure mostly blood oxygen activity. The relationship between brain structure, function and behaviour is still not well understood, but each region of the brain seems to perform a function that contributes to a particular behaviour. However, differences have been found in neural structure and functioning that “account for enhanced executive capability as one important neuropsychological characteristic of high IQ individuals and a more efficacious working memory as another” (Geake* 2009: 261).

As a result of the above, the last few years have seen a plethora of books and research projects dealing with intelligence or giftedness (Siaud-Facchin*, 2008). In the early noughties the government was beginning to give some attention in the UK to the cases of gifted children by creating Gifted and Talented (G and T) programmes in schools (Gifted = intellectually very able; Talented = exceptionally good at music/art/sports, for example). However, as discussed in Chapter 7, these were deemed to be flawed and were abandoned less than ten years after being implemented (Gifted and Talented Report, Ofsted, 2010 – see appendix 14). They typically dealt with the top performing (not necessarily high IQ) 10-15% of pupils in each school, regardless of the type of school. Pupils were selected on the basis of

their teachers' and even sometimes their parents' informal assessment, rather than by IQ tests, and often in specific subjects rather than for overall ability. Furthermore, an American-style summer camp for the gifted run at the University of Warwick between 2002 and 2007 was not considered successful enough to merit further government funding (Teacher Training Resource Bank, 2010).

High IQ children in the Mensa sense (IQ 132 or above on the Wechsler Scale) represent the top 2% per cent of the population and are usually very able across a broad range of subjects. Many are often not identified by their teachers because they do not perform or conform in a way that the teachers expect 'bright' students to behave. Identification of high IQ children is often left to chance if teachers have not been trained to recognise an underperforming very bright child (Heller, 2004). Yet, identification of gifted children at an early age is crucial because, being different from the norm, their needs demand attention from the start of their education journey (Lovecky, 1992; Van Tassell-Baska, 2000; Heller, 2004; Koshy, 2009). Unidentified, it is likely that the child's needs will be neglected leading to being more at risk of encountering social and emotional difficulties (Reynolds and Bradley, 1983; Webb, 2014).

According to the recent Worldwide Provision to Develop Gifts and Talents International Survey (Freeman et al., 2010):

“Teacher judgement was the most common route for identification of giftedness, reported in 80% of all programmes, whether as the sole or as a combined procedure. Normed tests, whether nationally normed or not, such as for general intelligence, were also used frequently, alone or in combination by 55% of teachers. The importance given to marks in school indicates that giftedness in this sample was most frequently perceived in terms of high measurable achievement rather than high potential in 63% of cases. The problem is that focusing on achievement inevitably leads to losing potentially gifted underachievers of all kinds, including the disadvantaged and the twice exceptional” (Freeman 2010: 12).

It is worth mentioning here that local cultures affect identification of high IQ and provision of relevant educational support (Freeman, 2005; Eriksson and Wallace, 2006). For instance, Western cultures tend to accept genetic influences as dominant and therefore select a small minority of children for special provision. By contrast, other cultures defend the environmental view which assumes that everyone is born with the same potential and that all children should be educated to the highest standard (Freeman, 2005).

It is possible that, because it concerns only a minority of children and practitioners' time in the classroom is limited, giftedness is, indeed, still mentioned only very briefly on UK teacher training courses. It is also often confused with high performance (Siaud-Facchin*, 2008). As a result, the concept of giftedness is very misunderstood. As Lovecky (2004) reports, there are currently very few experts and professionals in the UK educational, medical and psychological fields trained to identify and deal with gifted children.

In the same way as no two non-gifted children are the same, the variety in the abilities and personalities of gifted individuals makes it difficult to give a precise fool-proof description of what a gifted individual is like. However, the documentation provided by Potential Plus UK (formerly the National Association of Gifted Children) and in many publications on the subject of high IQ and giftedness (Plucker, 2001; Siaud-Facchin*, 2002; Heller, 2004; Terrassier* and Gouillou*, 2008, Webb 2014) highlights a number of characteristics that appear to be fairly common to many high IQ individuals:

- they master abstract concepts quickly and easily and are good at problem-solving;
- they are interested and curious about many different fields of study/have many interests;
- they have an advanced vocabulary at an early age;

- they have an excellent memory and a keen sense of observation;
- they have reading and/or math skills that are well above average;
- they enjoy the process of learning and seek new learning experiences independently;
- they demonstrate a focused interest in a specific or unusual field;
- when interested in a particular field, they can focus for long periods of time;
- they tend to be perfectionists;
- they are highly sensitive;
- they have a heightened sense of humour.

Because of the above characteristics, high IQ individuals are deemed to have the potential to be high academic achievers, and many are.

A number of characteristics – which are not measured by IQ tests - are also fairly common to many gifted individuals such as having the tendency to:

- be sloppy and disorganised with anything not perceived as important (i.e. most 'boring' school matters);
- be forgetful/ absent-minded;
- be indifferent to common conventions and courtesies, which leads them to experience conflict between conformity and individualism;
- act spontaneously, often impulsively and be prone to extremes;
- be argumentative and challenge authority.

Due to all the above, gifted children can easily be misunderstood and mishandled. As a result of being out of step with both their peers and their teachers, they often feel that they do not fit in. Indeed, as posited by Webb (2014), the characteristics of gifted individuals that are their greatest strengths are often also their Achilles' heel. Acquiring information quickly means that they are impatient with those slower than them. Their inquisitive attitude can lead to embarrassing questions and their diverse interests makes them look unfocused. Their desire for perfection may stop them from taking risks, especially if they encounter 'failure' and find this experience to be devastating. In addition, their keen sense of observation makes them see inconsistencies which may lead them to become disillusioned with the world around them (Webb, 2013).

High IQ individuals can have what Siaud-Facchin* (2008) calls 'a hidden handicap'. They have an extra-ordinary personality i.e. a personality outside the ordinary. The way they think, understand, analyse the world around them, question everything, and feel towards people are all part and parcel of their personality (Siaud-Facchin*, 2008). As Falck (2013) argues, giftedness is also associated with particular traits such as heightened excitability; sensitivity and perceptiveness; speed of cognitive processing; high energy and intensity of drive (Jacobsen*, 1999; Webb et al., 2005; Daniels and Piechowski, 2009; Falck, 2013; Nauta and Ronner, 2013; Webb, 2014).

It constitutes a “quantitatively, qualitatively, and motivationally different way of experiencing life” (Jacobsen* 2008:19).

Providing a long list of characteristics does not necessarily encapsulate what having a high IQ means (Roeper, 2000). “Giftedness is not part of a person like hair colour but all of a person” (Lovecky 2004:9). Similarly, Siaud-Facchin* (2008) suggests that to have special intellectual abilities is a way of being which influences all facets of one’s personality.

Although a high IQ score is always a characteristic of a gifted individual, being gifted does not simply mean having a high IQ score; it also means having a totally different thought process, a form of intelligence and intellectual functioning that is exaggerated and a deviation from the norm (Gagné, 1993; Tucker and Hafenstein, 1997).

In fact, the Anglo-Saxon term ‘gifted’ is somewhat misleading in that it has mostly positive connotations which imply some sort of privilege. By contrast, the term used in other languages, like French for example, is in some ways more illustrative of what giftedness actually means. ‘Surdoué’ in French means over-endowed i.e. it implies an excess of intelligence. It is this excess of intelligence, this departure from

the norm, that can lead to either great achievement or significant academic underachievement depending on the circumstances (Siaud-Facchin*, 2008).

What this research aimed to achieve was to find out, inter alia and retrospectively, what were the factors that high IQ participants perceived to have caused them to underachieve academically. In particular, it was to investigate whether a learning environment that did not acknowledge or cater for their difference could have been one of those factors.

This is what part 2 of this Literature Review Chapter reviews next.

2.3 Part 2 - High IQ and academic underachievement

2.3.1 High IQ and 'learning differences'

“Some people will never learn anything because they understand everything too soon”. (Alexander Pope, 1735)

According to Towers* (1987), the higher the IQ, the more likely it is that individuals will experience difficulties both in terms of studying and social adjustment. He argues that the ideal IQ for advanced academic study is a score of 115-125 (on the

Wechsler scale). Referring to the work of Hoover and Schultz (2005), he proposes that individuals with an IQ within the 115-125 range find the school environment very pleasant. They are liked by teachers, can obtain good grades with ease and, even if more intelligent than the majority of their peers, they are not too different from them. There are, therefore enough others who share their vocabulary, interests and activities. These are the individuals who typically become doctors, solicitors, accountants, academics etc. and rise to the upper middle class, even if they were not born into it.

However, Towers* (1987) argues that another 10 to 25 IQ points make a big difference. Children with an IQ of 120 will find work easier than a child with an IQ of 100 but children who have an IQ of 125-150 will find school work so easy as not to make any sense. As a result they may gradually develop a dislike of school.

Siaud-Facchin* (2008) suggests that the adults meant to teach them often seem very dull and, although the children feel that there is something wrong, they do not know what the problem is since the way they function is the norm for them. If they get constantly scolded by teachers and parents for not completing what seems to them meaningless tasks, they can either withdraw or become rebellious. She continues by explaining that in a high IQ person's brain, information is 'circulating' very quickly and, by the time one thought has been formed, it is gone and another

one has appeared. It is often difficult for them to extract what is the most important at this point in time and to write down their thoughts as they move so much faster than their hand can write them. Calvert (2008) and Conway (2008) also posit that people with brains functioning at high speed find it difficult to organise and structure their thoughts as there are so many of them circulating. Whilst it is easy to see how fast one can run, it is unfortunately much more difficult to see how quickly one's brain works.

High IQ individuals do not process information in a linear fashion and very often can give the solution to a problem but are incapable of explaining how they arrived at the solution. They can see the beginning and the end but not the middle and this can be explained in part by the speed at which information 'travels' in their brain (Lovecky, 2004).

For example, when experimenting with a photograph or painting that contains many elements, high IQ people will extract from them far more details and far more quickly than a person of average or even above average IQ. Similarly they will be able to see the shapes of jigsaw puzzle pieces and organise them in a coherent pattern more easily and quickly than a person of average IQ who would work things out piece by piece, in a linear and logical fashion. They are good at completing 'picture-less' jigsaws (Siaud-Facchin*, 2002).

The way that gifted children think and process information does not fit with the way in which children are taught and tested in schools. Gifted children often find it difficult to fit in if no special provision is made for them, especially if they feel different without knowing why (Ruf*, 2000).

Simonton (1999) demonstrates how his research identified traits shared by gifted children that should be a blessing but are usually a curse in a traditional classroom setting. Some examples from this research are given below.

He posits that gifted children possess a wide range of interests and are therefore exposed to many different concepts set in different contexts which help them develop the links between all the ideas circulating in their head. However, in a traditional classroom setting, subjects are often taught in a compartmentalised fashion. There is little transference between the science, history and art classes, yet there is a strong link between them that a gifted child will want to exploit.

According to Kim (2008) gifted children are often highly creative and need stimuli in their surroundings that satisfy their love of novelty, complexity and ambiguity. Yet, the ways in which subjects are taught are often rigid and don't value the fluid way in which gifted children think and learn.

Furthermore Hargrove (2010) argues that many high IQ individuals, because they tend to be highly creative people, are capable of defocused attention. This permits the mind to attend loosely to more than one idea or stimulus at a time and allows these individuals to play with a lot of different ideas until they are able to create something new. She argues that eminent creators tend to work on several interrelated projects at once, jumping back and forth depending on the one that is more promising at that moment in time. Yet, in a classroom setting, children with defocused attention may be labelled as suffering from attention deficit disorder for finding it difficult to keep their mind on one thing or for seemingly not being attuned to what is going on in the classroom (Hargrove, 2010).

Adda* and Catrou* (2003) also claim that creative people tend to be introverted if they find that what interests their mind is not often shared by others. As a result, in a classroom setting, group work is very counterproductive and awkward for the gifted child. Having to work on what seem to be pointless assignments with a large group of people who do not grasp his/her ideas is very demoralising and leads him/her at best to just endure the process or quit or, at worst, to express their frustration quite vocally.

Gifted children tend to be independent and unconventional thinkers who entertain ideas that seem preposterous to others – hence their love of science fiction and fantasy (Adda* and Catrou*, 2003). Yet, most original ideas that have contributed to the development of human civilisation were indeed thought of as absurd at the time. The speed with which ideas and new concepts are developed has been exponential over recent years, due to very fast technological developments. Whereas it took Leonardo da Vinci's flying machines 300 years before they were invented, the science fiction favoured by late 20th century 'nerds' and 'geeks' became reality very quickly. The same people who were mocking these unconventional thinkers twenty years ago for their absurd ideas now can't live without the Internet or their 'smart phone'.

Yet, a traditional school setting often does not allow for such unconventional thinking which is often dismissed by teachers as irrelevant. Being able to see things that others can't conceive and questioning the status quo does not go down particularly well with many teachers who are under pressure to cover the syllabus (Berger* and Francequin*, 2005; Coil, 2007).

The above average children who do well academically tend to succeed because they accept and follow the rules set out for them, are good at what they are told to do and, therefore, at pleasing the teachers (Ruf*, 1999). By contrast, gifted children

often have to be confrontational to make their different point of view heard. This can make them disliked by teachers and feel as though there is something wrong with them. This gradually leads them to hiding their ideas in order to fit in as they need, like most people, to feel that they belong to their peer group. They stop expressing their thoughts and ideas for fear of being mocked and this could be why so many fall by the wayside and go undetected or unsupported (Hargrove, 2010).

When teachers detect children who are very bright, it is not unusual for them to argue that 'as they are so clever, they will always be all right'. In a world of scarce resources it is unlikely that the gifted child's learning differences will be assessed as special needs requiring extra help. Yet many of them do need differentiated support. According to Colangelo et al. (1993) and Hargrove (2010), if they are not provided with extra stimulation, gifted children will soon find school to be boring, irrelevant and meaningless. This, in turn, results in their developing a disdain for education and educators which leads to academic underachievement.

Acknowledging, understanding and catering for their learning differences through acceleration (the speeding up of instruction as gifted children are fast learners who require little repetition) and enrichment (increased depth of study of topics which extends the regular curriculum) are seen to be the most effective ways of promoting their academic achievement. Indeed, when a child's advanced skills are nurtured

through providing differentiated, harder work the child can remain 'challenged and interested'. Keeping gifted children within their age-group rather than within their level of ability group seems to be very counter-productive, as suggested by Rimm* (2008a) ; Gross (2004); Freeman (2005); Stoeger (2008) and Geake* (2009).

Lovecky (2004:12) argues that the development of high IQ children is asynchronous and that "What gifted children conceptualise is not the same as what they can emotionally or socially manage". Webb (2014) also posits that, whilst their mental abilities and cognitive functions as children are much more developed than that of their peers, their emotional development is likely to be the same as that of their age-group. This discrepancy is believed to cause problems both in terms of their own sense of identity and their relationship with the world.

Yet, according to Freeman et al., (2010), in some countries acceleration through the syllabus is a common way of catering for gifted children's educational needs. Unfortunately, cases that are brought to the attention of the public are often extreme cases of children with very superior IQ, who are 'hot housed', obtain a degree at 14 and then burn out. These cases may deter teachers and parents from following the acceleration path, despite the evidence that it does work in the majority of cases (Colangelo et al., 2004; Gross, 2004; Renucci* and Colomb*, 2008).

In addition, a high IQ can hide a learning deficit such as dyslexia or dyspraxia, for example, and conversely, a learning deficit can hide a high IQ. Individuals who have a high IQ and another type of disability or learning difficulty are called twice exceptional – sometimes shortened to 2e Gifted - (Lovecky, 2004; Webb et al., 2005) and are at even greater risk of not having their needs met and of falling by the wayside. If a gifted individual has a specific learning difficulty or vision, hearing, speech or other physical disorder, the emphasis will often be placed on the disability and the exceptional ability will be overlooked (Webb et al., 2005).

According to Cline and Schwartz (1999) gifted students with disabling conditions remain a major group of underserved and under-stimulated youth. Whitmore and Maker (1985) also suggest that the focus on accommodations for their disabilities may preclude the recognition and development of their cognitive abilities. It is not unexpected, then, to find a significant discrepancy between the measured academic potential of these students and their actual performance in the classroom. In order for these children to reach their potential, it is imperative that their intellectual strengths are recognised and nurtured, at the same time as their disability or learning difficulty is accommodated appropriately (Willard-Holt, 1994).

Special Educational Needs are described in the Inclusive Statement of the National Curriculum 2011 as follows: “Children with special educational needs all have

learning difficulties or disabilities that make it harder for them to learn than most children of the same age. These children may need extra or different help from that given to other children of the same age”.

This definition does not cover children who have difficulties because it is easier for them to learn than most children of the same age.

The same document specifies that “For pupils whose attainments significantly exceed the expected levels, teachers will need to plan suitably challenging work. As well as drawing on work from later stages, teachers may plan further differentiation by extending the breadth and depth of study”. However, nowhere does it state that those pupils have ‘rights’ to receive extra help beyond what the class teacher may (or may not) be able and willing to provide.

Advice to parents in the above-mentioned document says: “If you feel that your child’s school or early education setting cannot provide all the extra help that your child needs, or your child is not making enough progress and so is falling further behind other children of the same age, you can ask the Local Authority to carry out a statutory assessment. With the Special Educational Needs and Disability (SEND) Code of Practice to be introduced in September 2014 these statutory assessments

will be replaced with Education, Health and Care (EHC) plans and some of the implications of this change will be discussed in Chapter 7.

The high IQ children will not necessarily fall behind other children in the early stages of their education. They are often able to 'cruise' for a few years and obtain good or average results which are enough for them not to get into trouble. By the time they start falling behind their peers, serious damage to their study skills and confidence may have already occurred (Delisle and Berger, 1990).

Norwich (2013:41) opens up a very interesting approach when saying that "If resource additionality is the key to special needs, then there is a question about whether additional resourcing for children with very high achievements (abilities) often called 'gifted and talented' could be said also to have a special need. Were special needs so interpreted, as a concept of exceptionality or atypicality, this unites those with disadvantages and advantages. However, the broad OECD concept of special needs does focus on 'vulnerability' and disadvantage".

It is indeed comforting to see that the issue is being raised by experts in special needs and inclusive education and that it is proposed that the exceptionality and atypicality of high IQ children should be included in the OECD model. However, there may have been a missed opportunity so far to examine the difference

between high ‘achievements’ and high ‘abilities’ as there can be in fact be a substantial discrepancy between the two, as demonstrated by this research. In addition and as mentioned earlier, the UK ‘Gifted and Talented’ schemes were discredited and abandoned because the selection for these schemes was flawed and the programmes they offered were very limited in scope. The terminology should therefore be used with caution.

Importantly, as will be illustrated in the next section of this chapter, high IQ children, when their needs are not catered for, could be as much at a disadvantage and as vulnerable as other children classified as having special educational needs. In some circumstances, an *ability* such as a high IQ can, indeed, become a *disability* and it is important for special educational needs experts to understand this.

2.3.2 Academic underachievement of high IQ children: symptoms and causes

The phenomenon of underachievement amongst high IQ children is not new. The term ‘gifted underachiever’ has been used for nearly seventy years by, for example, Hollingworth (1937), Terman (1947) and Ralph et al. (1966), causing controversy as it appeared to be an oxymoron (Hoover-Schultz, 2005). Indeed, it is usually assumed that gifted individuals are meant to be destined for higher achievement levels (Delisle, 1980).

Many empirical studies carried out in the 1950s to understand the differences between gifted achievers, gifted non-achievers, normal achievers and normal non-achievers did not come to any conclusive understanding (Morgan, 1952; Gowan, 1957; Passow and Goldberg, 1958).

Further research carried out during the 1960s offered some explanations for the differences between gifted achievers and underachievers deriving from factors such as lack of motivation, boredom and frustration, the learning environment, the home background and personality traits (Durr and Collier, 1960; Morrow and Wilson, 1961; McGillivray, 1964; Bachtold, 1969).

More recently, perfectionism and attention deficit hyperactive disorder have also been added to the list (Stoeger, 2008; Webb, 2013).

The main problem, according to Richert et al. (1982) and Montgomery* (2009) is that large numbers of high IQ children remain unidentified, in particular amongst underachievers who, as a result, are not included in support programmes and cannot have their learning and developmental needs met.

Furthermore, Ziegler et al. (2012) argue that one of the main findings of the study by Whitmore (1980) was that the methods for preventing underachievement in gifted

students were often insufficient. Indeed, he reports that finding the best form of identification and intervention possible still remains today one of the most important questions in giftedness research.

It may be useful here to examine the characteristics of gifted students as they may help understand further why they are prone to underachievement in the school context. According to Souza (2002), Silverman (1998), Souza (2006), and Silverman (2009) characteristics of underachieving gifted students include:

- having lots to talk about but little to put in writing;
- academic skill deficits/poor study habits;
- inability to persevere;
- lack of integration towards goals;
- poor self-concept;
- lack of self-confidence;
- fear of failure;
- fear of success;
- excessive need for attention or for isolation;
- avoidance of responsibility;
- avoidance of competition;
- negative thought patterns e.g. believe themselves unintelligent despite test results;
- and/or feel unable to succeed despite their high intelligence.

However, this does not mean that a gifted child is immediately obvious to a teacher. Very few teachers are trained to identify as a gifted child one who, because he is bored and disaffected, will not conform and whose performance is average or mediocre (Hargrove, 2010). Gifted children will often find it hard to put their thoughts down in writing and, therefore, will not give teachers the opportunity to assess that they are gifted. This is very isolating for these children who gradually lose self-esteem, even if on the outside they can appear at times over confident or even arrogant.

Siaud-Facchin* (2002) suggests that unidentified gifted children soon become demotivated by school. They don't understand who they are, they feel isolated and confused and become more and more wary of revealing their true self. They often give up on the education process and try to compensate by making their out of school activities their priority.

In addition, Souza (2002) and Souza (2006) propose the following as the main reason for gifted children's chronic underachievement: the lack of acknowledgement of their intellectual potential during the primary school years and the subsequent lack of support for their special needs. Gross (2004) also suggests that when high IQ pupils are not challenged in the classroom early on, they find the work too simple, become bored quickly and do not develop good work habits or positive feelings

towards school. Furthermore, Rimm* (2008b) posits that underachievement is their way of responding to what they feel is unrewarding work. They do not value what is asked of them or, indeed, any high marks they may get for the work they do produce and, therefore, do not 'bother'.

Many high IQ children can complete school work adequately or very well for quite a few years without finding out what the word 'work' means. If they master effortlessly the material that is being covered in class and this situation continues for several years, they learn that school work does not require any effort (McElwee*, 2010) and, therefore, they do not acquire any kind of study or learning skills. They do very little, do their schoolwork at the last minute and don't persist when faced with a challenge or a complex problem. As Rimm* (1986) suggests, they learn to play the game but do not learn how to be lifelong learners and are often overlooked as underachievers because their grades are acceptable or average and do not seem to warrant intervention. Whenever the curriculum becomes more challenging, they do not know how to cope with the demands made by the new material to be mastered.

Colangelo et al. (1993) add to the above that the relationship between effort and outcome is what creates the sense of internal control that differentiates achievers from underachievers. It is from accepting and conquering challenge that one builds self-confidence. It is from actual achievement that one develops a strong self-

concept. Indeed, Khan (2005) and McElvee (2010) suggest that high IQ underachievers are being denied the possibility of acquiring confidence since they have not experienced the relationship between effort and achievement or competition with others - another important skill building process.

Underlying the poor study skills is the feeling that they have no personal control over their educational success (Delisle and Berger, 1990). Even if they are aware that lack of effort is the cause of the problem they often don't really believe that they can obtain better results by working harder. Ruf* (1999) suggests that they become trapped in a negative cycle and, as time goes by, they feel less and less able. They don't know how to do better. They become more and more fearful of failure and their sense of efficacy decreases. They feel helpless as the gap between what they are achieving and what they know they should be capable of widens. Low grades lead to low expectations which lead to even lower performance. The cycle continues downward as under achievement feeds upon itself.

“Underachievement is a vacuum that sucks a child back into it with each step forward and it is virtually impossible to escape this vacuum alone. It is a multifaceted and progressive problem. It becomes more pronounced and increasingly difficult to treat with each passing year. If these children are placed in an environment that ignores their unique abilities and instead forces

them to be evaluated upon their lesser strengths, frustration, boredom and underachievement can quickly dominate their lives” (Hargrove, 2010:14).

Yet, children who develop self-defeating attitudes and habits in the school environment often display high levels of motivation for extracurricular activities i.e. when the content is relevant to them they can concentrate and work very hard and accomplish great things (Siaud-Facchin*, 2002; Siegle and McCoach, 2005).

Ryan and Deci (2000) argue that in order to want to excel, individuals must feel that it will bring them rewards and, in the school environment, this is likely to be good grades and praise. Yet, according to Stipeck (1993), Mueller and Dweck (1998), Dweck et al. (2004) and Elliot and Dweck* (2005) some children are not motivated by these extrinsic or external rewards. If motivation is engendered by the prospect of the pleasure gained from working on and or completing a task, it will only appear worthwhile to the gifted child if the task is intellectually challenging. Receiving good grades for something that the child perceives as really easy is not motivating (McElwee*, 2010).

There are of course others factors that may increase the possibility of the child’s failure to perform well in school tasks. Stoeger (2008) posits that there are three

types of environmental factors likely to contribute to academic underachievement in high IQ children: the school environment, family dynamics and peer relationships.

For the first type, and as already discussed, the two most common causes are known to be, firstly, rigid classrooms in which all students are expected to study at all times identical materials within the same time span. Secondly, teachers who fail to appreciate the quality of the child's work because they have different values or cultural prejudices.

For the second type of environmental factors, family dynamics, there is no doubt that a problematic family environment can have a negative influence on a child's behaviour and performance in school (Freeman, 2006; Rimm*, 2008b). A disrupted or unpredictable structure and organisation of family life is known to be destabilising and to have negative consequences on the child's school experience, whether gifted or not. According to Rimm* (2008b), in the case of the gifted child, this can be made worse by inconsistent parenting – sometimes due to not understanding the reasons for the child's behaviour. There can be conflict between one authoritarian parent who believes that the underachieving child needs to be disciplined and the supportive parent who wants to protect the child. As problems with school performance and behaviour increase with time, each parent may become more and more entrenched in their behaviour and this makes it very difficult for the child or

young adult to understand what is expected of them. There can also be conflictual relationships and jealousy between siblings who are not gifted or gifted but not underachieving which make it difficult for the underachieving gifted child to develop a positive sense of self (Grenier, 1985).

In her longitudinal study of gifted children over 30 years Freeman (2006) and Freeman (2013) concluded that parents did have a great influence on the gifted child's development. This could be positive or negative depending on how the parents reacted to their child's giftedness.

She made the distinction between children who had been 'labelled' as gifted and had received overt 'special treatment' and those who had been identified and nurtured but not 'labelled'. The former encountered more emotional problems than the latter. Parental and teachers' expectations of the 'labelled' child in some cases spurred the child to achieve academically whilst in others they made the child feel that they could never live up to the expectations others had of them, and they gave up.

In addition, during the parental interviews carried out for the purpose of her longitudinal study, Freeman (2006) found that the labelled gifted children with emotional difficulties had much more disturbing domestic circumstances, such as parental divorce or moving home frequently, for example, than those non-disturbed

equally gifted children. Tests showed that it was not intelligence as such that caused these disturbances, but domestic circumstances and parental skills, behaviour and beliefs (attitude towards homework, TV watching and punishment, for example). Most of the parents interviewed blamed the children's problems on their 'gift'. Although most of these problems disappeared as the children grew up, not all. Whilst she could not provide the data to back this up, her impression of the 'labelled' group in their forties was that they suffered more from depression than other groups.

The third type of environmental factors likely to contribute to academic underachievement in high IQ children, as identified by Stoeger (2008), is peer relationships. Social adjustment is indeed sometimes quoted as one of the reasons for gifted children underachieving. Yet, when global measures are used, overall results suggest that gifted children who were identified early in their school career are at least as well adjusted than their non-gifted peers and that gifted children are no more or less at-risk for psychological problems than their non-gifted peers (Gallucci, 1988; Howard-Hamilton and Franks, 1995; Nail and Evans, 1997). Indeed, the research suggests that rates of depression and suicide appear to be similar for gifted and non-gifted children (Baker, 1995; Cross, 1996; Mash and Barkley, 1996; Parker, 1996; Weismann-Arcache and Tordjman, 2012). In addition, most of the empirical evidence suggests that levels of anxiety are similar among average children and intellectually gifted children (Derevensky and Coleman,

1989; Neihart, 1991; Wautier and Blume, 2004; Weismann-Arcache and Tordjman, 2012).

The above-mentioned research therefore does not support the broad conclusion that a high IQ is in itself a source of social maladjustment in children but it seems that, unless appropriate educational services and parental support are in place, problems do occur (Baker, 1995; Parker, 1996; Gross, 2004). Consequences of these problems for well-being in adulthood have not yet been explored a great deal.

Studies by Reis (2000) have demonstrated that when underachieving gifted students were made to mix with high achievers or students from classes one or two grades above them, they often began to reverse their underachievement as if stimulated by the competitive element. By contrast, associating with non-achievers or students who they felt were not as bright as them often resulted in underachievement - peer pressure not to appear different being the primary force against getting good grades (Clasen and Clasen, 1995).

Neihart (1999) posits that the psychological well-being of a gifted child is related to the type of giftedness, the child's personal characteristics such as self-

perceptions, temperament and life circumstances but that the educational fit is the element that has the greatest influence on the adjustment of the child.

However, all the research carried out in this domain has been with children rather than adults and with children who had been identified as having a high IQ as a child. No research seems to have been carried out with adults whose IQ had not been identified when they were children and whose social and emotional adjustment in adulthood may have suffered because of this lack of early identification.

Nauta and Ronner (2013) and Falck (2013) whose research concentrates on gifted adults who were identified as having a high IQ as a child and were high achievers reported problems of maladjustment of these individuals in the work place. They also identified fairly significant negative levels of emotional problems, including depression in adulthood, amongst the individuals who participated in their studies. However, their research results did not specify whether the participants' poor mental well-being as adults mirrored what they had experienced as children or whether it was a new phenomenon.

As De Saint Paul* (1999) explains, our identity is built on our relationships with our environment and, in order to feel valued and good about ourselves, we need to know that we are making a positive difference to someone else. For example, being a source of joy to our parents or siblings, knowing that they are proud of us, that they think we are a good person, that we are important to them and that they want the best for us will play a significant part in helping us develop confidence and high self-esteem.

According to Ruf* (2005) and Ruf* (2012), not performing in school as expected and being scolded by parents for something the gifted child doesn't know how to change is likely to be confusing. They would like to please their parents and their teachers but they do not know how to. This can lead them to get increasingly angry and/or withdrawn as an expression of their frustration with a situation which they do not understand or feel they cannot control.

Being valued by teachers for being clever, or hard working or a good boy/girl, for doing as they are told, for getting the good results helps feeling good about oneself. This feeling is very rarely experienced by underachieving children and can lead to great unhappiness (Siaud-Facchin*, 2008).

Later in life, being valued by our employer for doing what we are employed to do, doing it well, sticking to the rules and bringing results that reflect well on them is another element that brings practical rewards and helps build self-esteem and confidence (De Saint Paul*, 1999).

When none of these happen, individuals may find it difficult to develop a positive sense of self and look for other ways of receiving good feedback outside school or home. This could be, for example by developing good computer games skills, for which they are instantly rewarded and which enable them to keep the external world at bay for hours.

This is of course relevant to everyone, but is particularly significant for individuals whose giftedness is not understood by parents and teachers or, later in life, by employers. Constantly disappointing people close to them and not understanding why, constantly feeling that their contribution is not appreciated or understood, gradually leads to withdrawing from any interaction that engenders negative feelings. It then becomes easier to fail and, thus, to fulfil everyone's expectations. From this develops what has been described by Dweck et al., (2004) as learned helplessness.

According to Schultz (2002:22) teachers, in practice, often rely on their experience and perceptions when defining underachievement. They label students formally or

informally according to their intuitions, which vary greatly from one setting (and from one person) to another - making the underachievement label tenuous at best.

For example, a teacher's intuitive and tacit experience is useful in a teaching setting, providing awareness that pedagogy may not be meeting the student's needs. However, when a student with a short attention span who does not prepare homework, yet scores well on quizzes and tests, is labelled underachiever for not working to potential or ability, something is amiss. It may not be the fault of the student. The educational setting, curriculum, or other psychosocial variables may have an impact on student performance. Schultz (2002:22) argues that dismissing the 'environmental issue' by casting blame and putting the burden of proof on the learner is unprofessional and unethical .

Similarly, Delisle (1994) stresses that labelling a gifted pupil an underachiever amounts to blaming the wrong person i.e. the victim. He posits that, very often, the victims of underachievement are considered by outside agencies to be responsible for the 'crime' committed. He suggests that we must change the words we use and alter our attitude vis-à-vis the notion of underachievement.

In addition, Whitmore (1980) suggests that by giving the label of underachiever to a pupil we apply a value judgment about what is worth achieving as we decide what is

meant by achievement and, by definition what is worth achieving. A teacher may think that reading a Shakespeare play is more worthwhile than mastering a new video game but a gifted individual may have a very different opinion on this subject – perhaps with good reason as some video games require very highly developed skills. Therefore, there can be a conflict between the values of the adult and that of the child and one can question to what extent underachievement exists or whether it is only in the eye of the beholder and a problem for the adults dealing with the child. Interestingly, Ziegler et al. (2012) describe underachievers as talented persons whose current achievement is below experts' expectations given their perceived level of ability and relatively low (rather than significantly low). By saying this they suggest that underachievement can be reversed.

This will resonate with those high IQ individuals who drop out of school or university and achieve in non-academic spheres or those who go back to education later, as mature students, when formal education acquires some meaning for them.

2.3.3 Underachieving gifted adults

According to Adda* and Catrou* (2003); Renucci and Colomb (2008); Stoeger (2008) and Silverman (2009) many underachieving high IQ individuals start displaying poor school performance around the age of eight or so – some even earlier. Many have

dropped out, at least mentally, by around the age of 13 or 14 whilst others manage to keep the pretence a bit longer but, for example, drop out of university.

Most studies in the field of high IQ and underachievement have focused on children and adolescents and extensive research has been carried in this area. So far, however, there has been little discussion which adequately covers what happens to them in adulthood.

Tolan (1994) questions whether the gifted child, once grown up, becomes an 'ex-gifted' child or a gifted 'ex-child'. She suggests that if one sees giftedness simply as an artefact of rapid progress through developmental stages, it should disappear when others catch up. If, on the other hand, one sees giftedness as an intellectual capacity that is the cause of an unusual developmental trajectory, it would be logical to see it as a stable attribute. This attribute will stay with the person throughout their life, even if there are no outwardly evident signs. The description of gifted ex-child therefore seems more appropriate.

Indeed, some scholars consider giftedness to be expressed through the achievement of something extra-ordinary, essentially external (Gardner, 1993). Others (Hollingworth, 1923; Shurkin, 1992) see it as an internal set of out-of-the-ordinary mental processes that may or may not lead to achievement. Traditionally,

our western culture's perception of giftedness has depended to some extent on the age of the individual under consideration - usually a child (Tolan, 1994).

The focus is slightly different with adults. Whereas we assess children on the basis of their learning ability and mental age, we assess adults by a different measure such as public recognition or financial standing. As a result, Tolan (1994) suggests that the concept of underachieving gifted adult is not one that is widely acknowledged. The number of adults who undertake IQ tests that prove unusual mental processing and show a discrepancy with their academic achievement is likely to be very small. In addition, and to confuse the issue further, it would also appear that some famous gifted adults – sometimes referred to as geniuses - seem to have sprung into the world fully-grown, never having been identified as having a high IQ when they were children, usually due to their poor school performance. Darwin, Edison, Churchill and Einstein are a few of the famous names associated with this phenomenon. It is hardly surprising, therefore, that there is some controversy and confusion over the concept of underachieving gifted adult.

One could argue that giftedness and high IQ are much more than just high potential, high scores and great achievements. When talking about underachievement in high IQ adults, maybe what is more appropriate to examine is the inner experience of 'falling short of potential' which, with the accumulation of years, is likely to be more

acute in adults than in children. How this experience impacts on their life satisfaction, self-esteem, identity, and even mental health as well as their wealth may be a worthwhile way of measuring the effects of academic underachievement (Miller, 1996, Ruf*, 1999). It is, indeed, an important element of what this study is about.

Research carried out by Bost* (2011) leads her to conclude that high IQ individuals are often vulnerable to four kinds of adjustments not often faced by other people. Firstly, they have learnt over the years to lead an effortless existence and have not acquired the sense of effort and hard work needed to accomplish anything of great importance. Secondly, the fact that they are capable of doing so many things means that they tend to spread themselves too thinly or to change direction too often, therefore never really 'achieving' anything major in any sphere. Thirdly, they are not very good at suffering fools gladly and can find it difficult to refrain from openly expressing their opinion when they hear something they consider to be unintelligent. Finally, because there are not many like them, they may find it difficult to find someone with whom they can truly connect and, therefore, they may suffer from social isolation. Towers* (1987) suggests that this is why such individuals seek and join societies like Mensa or other learned societies so that they can mix with people with whom their can connect on an intellectual level.

Baker (1995) adds to the above that high IQ individuals tend to suffer more from isolation and depression, especially existential depression, than the non-gifted population, spontaneously without any apparent triggering event. Webb (2014) posits that depression is anger at oneself or anger at a situation over which one has no control, the two being often related. Existential depression occurs when one confronts issues of existence such as life, death, disease, and freedom (Baker, 1995; Webb, 1998; Webb, 2014) and an individual suffering from existential depression questions the meaning of life and often concludes that it is meaningless. Although there are no reliable figures it has been suggested (Webb, 1998; Sjaud Facchin, 2008; Bost*, 2011) that suicides are more common amongst the gifted adult population than the norm.

The literature on giftedness in adults tends to assume that giftedness is the most distinguishing influence on gifted people's experience and trajectory in life (Jacobsen*, 1999). The few attempts that have been made to classify gifted adults' different ways of comporting themselves and their different trajectories in life, such as differences in personality highlighted in the psychology and psychotherapy literature, are rarely mentioned in the giftedness literature (Streznewski* 1999; Shaughnessy*, 2010).

Nauta and Ronner (2013) describe what brought the individuals of their eleven case studies to seek help from an occupational physician and/or a work and organisational psychologist, after years of feeling that they did not fit in their work place. As a medical doctor with a degree in Work and Organisational Psychology and a high IQ herself, Nauta highlights the plight of these individuals whose difference is not understood and dismissed by medical professionals as the possible cause of their difficulties in the work place. Her study of such individuals seems to indicate a clear correlation between high IQ, perceived underachievement and high levels of unhappiness necessitating intervention from psychiatrists, therapists and clinical psychologists. These findings are similar to those of Lovecky (1986).

Indeed, Falck (2013) also agrees that it is usually in the work place that high IQ adults encounter difficulties relating to whether or not they can fulfil their potential. Her research shows that their high IQ is an important element of the gifted adult's personal identity. Not being able or allowed to make the most of their abilities in the work place can lead to mental health problems. Yet, she has found that neither the workplace-related nor the psychotherapy literature highlights these issues. In addition, Webb (2014) suggests that it is currently difficult to find psychologists who are knowledgeable about the characteristics of giftedness and their impact on the individuals' way of being. This makes it difficult, therefore, for these individuals to secure appropriate help.

2.4 Conclusion

For over a hundred years, scholars have been elaborating theories and tests to measure intelligence, an attribute for which there is no universal definition, and many of those have been controversial. When aiming to predict an individual's potential for academic studies, the early 21st century has seen a return to the IQ tests devised in the mid-20th century such as the Wechsler and Cattell tests as they have proved more reliable over time than others for this purpose (Frazier and Youngstrom, 2007; Beaujean, 2009).

The abundant literature in the field of intelligence highlights the difficulties encountered by children whose high IQ has not been identified and who, because their different learning needs and styles have not been catered for, underachieve at school. This phenomenon was highlighted seventy years ago, has been researched ever since and, despite the results of the research explaining its causes and cures, academic underachievement still affects thousands of high IQ children today (see appendix 13).

What is quite striking is that most of these studies have been carried out with teachers and children as they were experiencing their giftedness and / or

underachievement, but not many researchers so far seem to have investigated what happens to these young people a few years or decades after they have left the school environment.

The extensive research carried out by Freeman (1991) and Freeman (2010) with high IQ children in the UK has included longitudinal studies into adulthood but all the individuals concerned had been identified as having a high IQ in childhood. Some had been 'hot housed' with detrimental consequences such as depression in adulthood, whilst others were leading successful and happy lives. Similarly, the research undertaken by Streznewski* (1999), Nauta and Ronner (2013) and Falck (2013) concentrated on adults who were academic high achievers but later experienced difficulties in their working life.

By contrast, this study aims to examine the issues from a different angle in order to fill the gap in the literature.

It investigates firstly the circumstances of adults who have had a history of early academic underachievement and who were not identified as having a high IQ until adulthood. Secondly, it examines the impact of their negative experiences of early formal education on their professional and personal lives in adulthood.

In all cases, this study related to the perceptions of the participants after they reflected on their remembered experiences. Those do not constitute universal 'truths' and, therefore, cannot be generalisable as such.

From the gaps in the Literature Review three main research questions emerged, as follows:

Firstly, to what extent did the causes of academic underachievement as perceived, in hindsight, by high IQ adults match or not what was highlighted in the Literature Review?

Secondly, in what ways was these individuals' life trajectory influenced by their early academic underachievement?

Thirdly, what lessons could be learned from these individuals' experience that may help educators and policy-makers find strategies to prevent academic underachievement in high IQ individuals?

In order to elucidate the above, it was necessary to develop a research framework and design appropriate for a retrospective study that would enable the voices of these individuals to be heard. Details of these can be found next in Chapter Three.

CHAPTER 3

Methodology

3 METHODOLOGY

3.1 Introduction

The Literature Review helped determine the three research questions:

Firstly, what do adults who have a high IQ and have underachieved academically perceive the causes of their underachievement to be? Do their perceptions match what was highlighted in the Literature Review?

Secondly, in what ways has their life trajectory been influenced by their early academic underachievement? As there appears to have been little research so far on this topic, could the results and findings from this study help fill a gap in the literature?

Thirdly, what lessons could be learned from the participants' experience that may help educators and policy-makers find strategies to prevent academic underachievement in high IQ individuals?

In order to answer the research questions and to meet the aims of the research, it was necessary to seek relevant evidence. The purpose of this chapter is to describe the methodology chosen to fulfil those aims.

It starts with a methodological discussion, explains the rationale behind the research design and tools selected and describes the methods used. It then reflects on how thinking about the research question evolved over the five years' duration of the study and comments on the research process itself. This includes a reflection on the influence of the researcher on the process as well as the influence of the process on the researcher.

3.2 Methodological discussion

Thomson and Walker (2010) posit that methodology is the theory about the research methods which underpins the decisions made about the researcher's range of choices whilst the methods are the 'tools' that are used to carry out the study.

As suggested by Best and Khan (1998: 89-90) "Quantitative research consists of those studies in which the data concerned can be analysed in terms of numbers and its results are readily analysed and interpreted". Blaxter et al. (1996: 61) posit that, by contrast, "qualitative research tends to focus on exploring, in as much detail as possible, smaller numbers of instances or examples which are seen as being interesting or illuminating, and aims to achieve depth rather than breadth".

For the purpose of this study it was necessary to use a mixed methodology to answer the research question. A quantitative research paradigm was necessary in

order to explore and measure how prevalent various aspects of the participants' experiences were. A qualitative research paradigm, sometimes also referred to as interpretivist or phenomenological (Burch, 1989; Cryer, 2000), was also needed in order to analyse, understand and interpret the results.

McKereghan (1998) posits that quantitative and qualitative research are the ideal ends of a continuum along which actual research takes place and Best and Khan (1989: 89-90) argue that "Both types of research are valid and useful. They are not mutually exclusive. It is possible for a single investigation to use both methods".

The quantitative paradigm relies on numerical data and mathematical treatment of that data. This is usually suited for measuring large samples of items or people, the purpose of which is to offer a comparison of extensive data. The 'truth' that is uncovered is thus grounded in mathematical logic. With this type of approach, questions can be answered about what is happening and this provides statistics about the phenomenon being researched. However, Cryer (2000) suggests that this approach sometimes provides limited answers and often does not directly give reasons why something is happening.

Yin (2009:137) also argues that "Collecting quantitative data is often used to generate hypotheses based on the results of the data collected about different variables [.....] however, collection of statistics is not the answer to understanding

meanings, beliefs, ideas and experiences which can be understood better through qualitative data”.

In addition, Cryer (2000) argues that no research methods or techniques necessarily sit in only one research paradigm and that what decides the research paradigm is not a method, but how the resulting data are to be used.

The latter argument is illustrated by the questionnaires used in this study. They were used to collect quantitative data for statistical purposes and figures showing prevalence of various items which were translated into charts for ease of comparison. However, as the questions were open-ended in both the questionnaires and the interviews, qualitative descriptions of the participants' experiences and opinions were extracted in the form of quotations to illustrate the generalisations drawn from the quantitative data. As a result, the quotations from the questionnaires and interviews were also used for making a case within the interpretivist research paradigm. Indeed, they provided the impetus for a move towards an interpretivist paradigm with the subsequent one-to-one interviews. Those focused on individual cases and allowed for more in-depth enquiry and represented detailed examples of the argument.

In this study, personal knowledge and experience of the participants provided the sources of data which gave the researcher access to participants' understanding of

their experiences, actions and motivations. Trying to understand a phenomenon (here, causes and effects of underachievement) normally means gathering in-depth information and perceptions through inductive methods in order to represent them from the perspective of the actors in a particular situation. Van Manen (2002: 21) argues that “it borrows people's experiences and their reflections on them in order to provide an understanding of the deeper meaning or significance of some aspects of their human experience, in the context of the whole of human experience”. Aoki (2005) suggests that this type of approach to research provides a voice for the participants.

The approach used in this study made it possible to add to the literature base on the academic underachievement of gifted individuals by looking at it from an angle that has so far been ignored: its long-term consequences, as reflected by the learner, with hindsight. Participants said that they had volunteered because they felt that they had a story to tell and a desire to be heard. Their stories were analysed using the qualitative paradigm in an attempt to find common threads of meaning for the phenomenon being investigated.

Epistemologically, this type of approach also stresses the importance of personal perspective and interpretation. Ideally, the process should start from a perspective free from hypotheses, bias or preconceptions. Yet, it is acknowledged that this is often difficult to achieve and that it is better to make the researcher visible as a

subjective actor in the frame of the investigation rather than as a detached and impartial observer (Stanley and Wise, 1993). As posited by Lester (1999), adding an interpretive dimension to the data collected can enable it to be used, for example, as the basis for informing, supporting or challenging policy and action. However, as Schultz (2002:19) suggests, “although it is possible to capture the essence of meaning of what participants are willing to reveal, one has to be vigilant to interpret objectively the data collected”.

The researcher’s role and involvement as the parent of a gifted underachiever, who later discovered unexpected facts about her own experiences of education, provided some basis for reflecting on participants’ statements and understanding their situation. It is therefore acknowledged that the research had a subjective and interpretive stance. In addition, in view of the nature of the topic investigated and of the participants involved in it, one has to acknowledge that there are ‘multiple realities’ as expressed by Vygotsky (1978) in his work relating to the theory of social constructivism. Indeed, the stories highlighted in this study only represented the life experiences of 158 Members of Mensa and the research framework was specific to this study. It was neither replicating an existing model nor suggesting that the study could be replicated or provide a universal stance. It represented the views and observations of a particular group of people and was carried out in order to identify problems and attempt to understand their causes and effects as perceived by that group.

The results and findings may be indicative of the experiences many other high IQ underachievers have had, but the research remains incomplete and is in need of further examination and explanation, as explained under 'Limitations of the research design' at 3.6, and articulated by (Schultz, 2002: 31) as follows:

"No single interpretation of human experience will ever exhaust the possibility of yet another complementary, or even potentially richer or deeper description".

3.3 Ethical issues

This research was approved by Mensa and the School of Education Research Ethics Committee of the University of Hertfordshire and carried out in accordance with its Ethical Principles for Conducting Research with Human Participants as well as by Mensa (appendix 1). All the data were handled in accordance with the Data Protection Act (1998). Signed confidentiality agreements were obtained in advance and data were stored separately from participants' names and contact details in order to securely protect participants' identities from being linked with any of the data collected.

Participants were made aware of the potential benefits and risks of their participation. The main potential benefits were described as the opportunity of exploring a topic of personal relevance. The main potential risks were described as any negative effects that answering questionnaires and participating in an interview may cause, such as difficult memories or upsetting feelings. In order to mitigate these, participants were provided with full information of these risks and requested to give their full informed consent. They were also told that they had the right to choose which questions to answer or not answer if they felt that some were difficult and to withdraw from participating at any time in the process. Every participant's response to the questionnaire was acknowledged by email and a brief analysis of the results of both questionnaires was subsequently sent to the participants. Those who attended an interview were sent a copy of the transcript of their own interview so that they could ensure that they were satisfied that their contribution had been accurately reported.

These measures seemed to prove satisfactory. Participants were overwhelmingly interested in the study and very eager to contribute. Many respondents said that completing the questionnaire had taken quite a significant amount of time but that they had found the time very well spent as it had enabled them to reflect on life experiences that they had not previously attempted to analyse.

Several reported difficulties participating in the study due to the highly emotive aspects of their responses but they said that they had striven to overcome these difficulties as they felt that their contribution to the investigation was very important. About one third of the people who had originally responded to the appeal for volunteers, some of whom with lengthy accounts of their experience in their email responses, did not return the completed questionnaire. One can speculate on the reasons for this: the difficulty of the emotional aspect, the length of the questionnaire or loss of interest in the study, for example.

The ten interviewees were given the opportunity to comment on their experience of the process and all reported having found the experience worthwhile. None of the interviewees reported ill-effects from their participation in the study and all requested the desire to see the research results/findings and expressed looking forward to receiving them.

3.4 The Research Design

According to Thomson and Walker (2010), a research design is the way in which the researcher assembles and sequences the tools, and the ways in which these are applied, according to the principles elaborated through the methodological choices in order to answer the research question. It explains what needs to be done in order to discover something new. It justifies the methods of enquiry to be used.

As stated earlier, the aim of this particular study was to try and understand what was perceived by high IQ adults as the causes and the long-term effects of their academic underachievement. The first step was to find out, via a literature review, what was already known about this topic and determine what elements were missing, if any. The literature review highlighted that the causes of the phenomenon and cures for it are well researched and well-known by experts. Yet, it did not reveal whether those having experienced the phenomenon were aware of its causes and cures. It did not either examine what its long-term impact may be. Having established this initial understanding of the area of research interest from a theoretical point of view, it was necessary to seek individuals from whom it may be possible to elicit the relevant missing data. It was felt that, once participants had been found, these data could be collected via questionnaires and interviews. Both of these needed to be semi-structured to ensure that all respondents were asked the same questions but had some freedom in the way they expressed their answers. The design of questions to be asked in the questionnaires and interviews is explained in 3.5.1.

The first part of this particular study was exploratory in nature. It aimed to gather information about the extent of the phenomenon of academic underachievement amongst high IQ individuals and about a number of related variables and issues, both simple and complex. The second part was explanatory research in that it

sought to understand 'why' by exploring a possible cause and effect relationship between several phenomena, high IQ, academic underachievement and impact of those on life trajectory. The final expected outcome was to attempt to draw conclusions from the data collected that would, hopefully, be useful to a number of stakeholders by giving them an insight into the phenomena explored.

In order to achieve the above it was necessary to provide both a measurable set of results showing the prevalence of various themes and a qualitative assessment of the data. Due to the mixed methodological stance required to answer the research question, different tools/methods were employed. A flow chart overview summarising the research design can be found at appendix 2.

3.5 Research Methods

The various methods used to attempt to understand the issues at stake and which made it possible for conclusions to be drawn are detailed below.

3.5.1 Questionnaires

Two questionnaires were devised and administered for this study eighteen months apart as the second one was devised as the result of the analysis of the first one.

Questionnaire No 1

Very early on in the enquiry process, informal semi-structured interviews were conducted with a sub-sample of volunteers at a Mensa conference. The first questionnaire (appendix 3) was devised as a result of the responses given during these informal interviews and was piloted with students and colleagues to ensure the questions were clear and unbiased. It was then sent to all members of Mensa who responded to an appeal published in the British Mensa magazine (appendix 12). The aim of it was to obtain an indication for each participant of the perceptions they had of their own academic underachievement, what they perceived the causes of it to be, when and why they had joined Mensa, what impact their underachievement had had on their life and what they would have liked to have been different. In total, 158 individuals returned the fully completed questionnaire.

Questionnaire No 2

Amongst the various aspects of the participants' experience the analysis of the above-mentioned first questionnaire revealed, one struck the researcher as particular worthy of further investigation because it provided some hope in what was otherwise a fairly bleak landscape. Amongst the 158 who completed the first questionnaire 64 (40.1%) stated that they had reversed their academic underachievement at school by acquiring higher education qualifications at some point in their adult life.

Participants amongst this sub-sample were therefore asked if they wished to complete a further questionnaire. The aim of this second questionnaire, (appendix 4), was to elicit from respondents what they perceived were the factors that had had been instrumental in their deferred academic success and the impact that this delayed academic achievement had had on their life. Completed questionnaires were returned by 50 participants.

3.5.2 Interviews

As stated earlier, Cryer (2000) and Yin (2009) argue that quantitative data is sometimes not sufficient to provide 'the full picture'. Whilst the results from the two questionnaires provided broad information about the respondents, useful and comprehensive quantitative data and some qualitative data, it was felt that a greater in-depth analysis of a few cases would be useful to understand better all the issues at stake. Interviewing was therefore selected as a qualitative method to allow for a greater depth of data to be collected than would be possible with questionnaires. An interview protocol was designed (appendix 8) and used to ensure that the interview would remain focused whilst avoiding the rigidity of a questionnaire or fully-structured interview. The latter may have prevented participants from offering responses to questions unforeseeable when the research instrument was designed.

The design of the semi-structured interview questions was based on the two questionnaires the participants had completed in the earlier phases of the study. Their aim was to seek clarification of meaning and to develop a greater in-depth appreciation of the issues at stake. As stated by Yin (2009:108):

“Semi-structured, open ended interviews manage to both address the need for comparable responses – that is, there are the same questions being asked of each interviewees – and the need for the interview to be developed by the conversation between the interviewer and the interviewee. A series of set questions are asked but there is space for divergence with the interviewer who always returns to the structured interview questions”.

Interviewing participants allowed to address a broader range of issues than had been possible in the questionnaires. In addition, taking into account what had brought the person to taking part in the interview, what happened during the interview and the results of the interview both for the interviewee and the interviewer allowed for better contextual information to be obtained.

3.5.3 Building personal profiles

Although the personal profiles built do not exactly constitute case studies the process of compiling them was similar to that of case studies. “Case study research

is the preferred method when (a) “how” and “why” questions are being asked, (b) the investigator has little control over the events and (c) the focus is on phenomena in a real life context.” [.....] “In case studies an essential tactic is to use multiple sources of evidence, with data needing to converge in a triangulating fashion” Yin (2009:2).

The aim of the in-depth interviews was to build personal profiles taking into account factors other than educational experience likely to have affected academic performance e.g. family context when growing up, types of educational establishments attended, socio-economic background as a child and then as an adult and personality traits. It sought to see if there were any common factors between all ten interviewees in terms of early and late educational experiences. It also aimed to highlight alternative causes for academic underachievement, concentrating on personality factors that may corroborate what is known of the difficulties that high IQ adults sometimes have in the work place (Falck, 2013; Nauta and Ronner, 2013).

3.5.4 Sampling and recruitment

It was necessary to find potential participants who were all adults (so that they were in a position to assess long-term effects), who had been formally assessed as having an IQ score only found in the top 2% of the population and who felt that they had underachieved academically at school.

Members of Mensa, are described by the Society as all sharing a high IQ but coming from all walks of life. This seemed to imply that a wide range of examples would be provided by the chosen sample. The British Mensa Research Officer, who was interested in the project, provided very useful information and facilitated the process of contacting members of the Society. Attendance at their annual general gathering made it possible to meet members informally and decide whether some may be able to help with the investigation. A hand out was left on the registration desk giving details of the research and explaining that during the three day event there would be opportunities for Mensans who felt that they had underachieved academically to be informally interviewed. The eight people who volunteered and other members met during the week-end event confirmed that there were individuals amongst Mensans who would qualify to take part in the study. The information gathered from these informal interviews formed the basis for contextual information that helped determine the content of the appeal for volunteers and, subsequently, what questions would be most suitable for the data sought. Encouraged by the interest received and the research having subsequently become the subject of doctoral studies, Mensa gave the permission for an article to be published in the monthly magazine of August 2009 (Favier-Townsend, 2009a) to recruit participants (appendix 12).

Sample and recruitment for the first questionnaire

The article appealed for members to volunteer to participate in the proposed study providing they met the following criteria:

- a) they were adults;
- b) they perceived themselves to have underachieved academically at some point in their life;
- c) they were willing to participate in the study.

A total of 184 people replied to the appeal via email or letter in the first week after the article appeared in the magazine and another 68 at a later date. Out of these, 158 (63%) returned the fully completed questionnaire which consisted of ten open-ended questions.

Sample and recruitment for the second questionnaire

Analysis of the data collected in the first questionnaire revealed that 64 (40.1%) had returned to education later in adult life. These data appeared interesting as it seemed to indicate that academic achievement did occur for this sub-sample, albeit not in the compulsory school system. This was felt to warrant further clarification, which resulted in the construction of a second questionnaire (appendix 4) aimed at these 40.1% late achievers. The 64 participants who had been coded as having obtained academic qualifications as an adult were emailed (appendix 5) about the

second phase of the study and a total of 50 individuals (78% of the sample of 64) completed the second questionnaire. A further eight expressed an interest by email but did not return the completed questionnaire.

Sample and recruitment for the interviews

As reading information about someone on paper does not necessarily provide the full picture, it was felt that meeting a sample face to face and would provide various 'sources of evidence' which may be useful. Whilst it would have been interesting to have a larger sample, it was decided that, in view of the time and financial resources available, no more than ten interviews could be carried out. It was felt that this-sub sample would be representative enough (20% of the whole sample) of the 50 individuals who had responded to the second questionnaire.

These ten individuals were randomly selected to provide as unbiased a sample as possible. To keep in with the representative nature of the British Mensa membership it was decided that there should be six males and four females. The 50 participants who had responded to the second questionnaire were contacted by email (appendix 6) and 30 people (60%) responded that they were interested in participating in interviews. Amongst those, 22 (73% of the 30 or 44% of the 50) said that they were available at the time when the interviews were scheduled to take place. Out of these, ten were selected at random (names drawn out of a hat): four females and six males.

Because of the time it would involve for the interviewer to travel to many different places, respondents were asked if they could attend an interview at the University of Hertfordshire in Hatfield (with their transport costs reimbursed) or London or a convenient location within a 200 miles radius of Hatfield. Out of the ten volunteers, seven agreed to come to Hatfield (three of whom did not want their travel costs to be paid). Another two agreed to meet in Derby and one in London (appendix 7). Whilst it is fully acknowledged that Mensa may not be representative of all high IQ individuals, it would have been very difficult to find participants without the support of such an organisation. In addition, the fact that participants were self-selected (by replying to an advert and volunteering to complete questionnaires and attend interviews) impacts on the representativeness of the sample as discussed in 3.6. However, Mensa members represented a convenience sample that was suitable for the purpose of the research.

3.5.5 Data collection

The data collection process was similar for the first and second questionnaire. The article appealing for volunteers asked potential participants to email the researcher with an intention of interest (Favier-Townsend, 2009a; Favier-Townsend, 2011). Each volunteer was then emailed the relevant questionnaire with a description of the study and its aims. Both questionnaires consisted of ten questions that were

deliberately broad so as to allow for individuals to express their thoughts and feelings in a loose fashion.

For both questionnaires responses were received mostly by email but a few respondents returned them by post, either typed or hand-written. As soon as these questionnaires were received, they were printed or photocopied so that a hard copy would be available for easier further consultation. They were also carefully filed both electronically and in paper form. Each respondent was given a number in chronological order of the receipt of their response to the appeal and when the second questionnaire was received it was filed with the first one from the same participant. The respondent number used for the quotations in Chapters Four and Five is this one.

The aim of the first questionnaire was to elicit from respondents data about in what way(s) they perceived they had underachieved, what they thought the reasons for this were, why and when they had joined Mensa, what impact their underachievement had had on their life and what they wished had been different. The aim of the second questionnaire was to elicit from respondents data surrounding their deferred academic success that may help explain the differences between the time when they had underachieved at school and the time when they had obtained academic qualifications as well as the ways in which acquiring academic qualifications as adults had had an impact on their life.

For the interviews, collecting the data was done via audio-recordings which were then transcribed by an external agency. The same pattern was followed for all interviews which were 'focused' in that they lasted just one hour (appendix 8). They were recorded with the participants' consent. Another five minutes or so was spent talking to the participants prior to the interview to break the ice and after the interviews to bring closure. A small lag time was allowed in between each for making brief notes. The interviews therefore took about eighteen hours in total.

The first ten minutes of the interview were spent double-checking the participant's 'story' and filling in the gaps where necessary. All participants were then asked the same questions and encouraged to answer those as fully or briefly as they wished but the conversation was 'guided' as it was felt important to pursue a consistent line of inquiry and to collect data on all questions by the end of the interview. The last five minutes of the interview were devoted to asking the interviewee to propose their view on a topic they had been asked to reflect on in advance of the interview: thoughts of what they would have liked to have been different and why and whether an alternative on line/open university type of education for children with high IQ would have worked for them.

The atmosphere of the interviews was 'non-threatening' and friendly and participants were very open and eager to share their views. None minded being recorded and all of them agreed to have their photo taken so that the researcher could remember

them better when compiling the personal profiles. As the questions were designed to give an insight into various matters, the interviewees behaved as 'informants' rather than respondents. The aim of the questions was to provide confirmatory evidence for the questions investigated by the research and to investigate 'rival explanations' not considered hitherto.

Quality criteria for interviews as described by Kvale and Brinkmann's (2009:164) were present throughout in that they showed a "mixture of short interviewer interjections and extensive interviewee responses and a great number of spontaneous, rich, specific and relevant answers" from the interviewees. Throughout, meanings of what interviewees were saying, were checked and clarified and when contradictions were identified they were queried. A copy of the transcripts was emailed to them for checking and they returned them to the researcher with amendments, if appropriate.

3.5.6 Data analysis

The responses received in the questionnaires provided extremely rich data as questions were often answered in a very detailed and comprehensive fashion. They also showed a very high level of literacy even amongst those who had left school at sixteen years of age – an interesting fact and possibly confirmation that high IQ

individuals are often voracious readers who, despite lack of formal education in some cases, may have learnt to write well because of extensive reading.

The analysis of the data was quite a long, drawn-out process but it did provide very comprehensive and meaningful information. The anonymised data was processed as follows. As questionnaires were read for the first time, a number of themes began to emerge which were listed and entered in an excel document. Questionnaires were then read a second time and a cross was entered for each participant against one (or several if appropriate to the question) theme (see appendix 17). The number of participants for each theme was then totted up, providing numerical data which allowed to produce tables and graphs for the quantitative analysis part of the study shown in numerous graphs in Chapters Four and Five.

This is different from template analysis where codes or themes are identified or developed before the data are examined (Braun and Clarke, 2006; Gibbs, 2008). Using this thematic approach made it possible to tabulate the data and to express quantitative results based on those themes in pie and bar charts.

Whilst this quantitative analysis was very useful to demonstrate the prevalence of each of the themes it did not highlight the very rich qualitative elements of the responses to the questionnaire.

It was therefore felt that, to illustrate more fully what the respondents had revealed, extracting quotations from the questionnaires and presenting them as a narrative would be very useful as it would make the 'voice' of the respondents heard through them more clearly. Every single questionnaire was therefore read for a third time and quotations extracted from them were copied and pasted into the narrative for chapters 4 for each of the questions asked in both questionnaires.

The same process was repeated with the second questionnaires when they were received eighteen months later and results, charts and quotations corresponding to these are to be found in Chapter Five.

By contrast, for the ten interviews, the aim was to draw further evidence from that collected in the questionnaires to establish a causal relationship, that is to say to make inferences as to whether certain conditions were believed to have led to other conditions. The analysis of the findings is mostly qualitative, as the small numbers of interviews could not really produce results quantitatively significant. They are expressed in chapter 6 as a narrative based on quotations from the interviews.

A dedicated external service was employed to transcribe the content of the ten interviews and the transcriptions were then sent to the interviewees for them to check.

The data provided in each of the ten interviewees' transcripts was classified. A table was devised for each question which was then divided into three columns: one showing evidence which confirmed what the literature review had revealed, one showing alternative explanations and one addressing factors such as personality or behavioural traits that may have played a role in both issues of underachievement and later, achievement outside the schooling system (see appendix 11). The process was repeated for all interviewees thus providing 30 tables of data to be analysed.

Once classified in this way, the data were interpreted by using the technique of explanation building. As posited by Yin (2009:141), "To explain a phenomenon is to stipulate a presumed set of causal links about it, 'how' or 'why' something has happened". Using this technique helped gradually to extract the main emerging themes, using data from both the questionnaires and the interview for each participant (see appendix 18).

3.6 Limitations of the research design and methods

An important strength of the research design was using triangulation between three different sets of data as it showed how qualitative and quantitative elements interacted with each other. This interaction made it possible to gain increasingly meaningful data and to demonstrate that quantitative measures on their own do not

tell the whole story. Using multiple sources of evidence helped the development of converging lines of enquiry by providing several measures of the same phenomenon, thus establishing a chain of evidence.

However, the research design and methods had a number of limitations, as follows.

Firstly, the choice of sample meant that participants were self-selected on three counts: they elected to take the Mensa the test, they elected to join the Society by paying their annual, albeit modest, subscription and, they chose to take part in the surveys.

It could be argued that it is somewhat strange that individuals who have a very high IQ would choose to prove that they are 'intelligent' by joining such a society rather than through tangible achievements in their educational and professional life. The surveys revealed that the participants had felt the need to take the test precisely because they could not prove their high IQ in any other way. In addition, in many cases they had decided to join the Society in order to have the opportunity to mix with people who would provide the intellectual stimulation they could not enjoy in their everyday professional and social circles.

It is therefore acknowledged that they were not necessarily representative of the total two per cent of the population that has an IQ in the 98th percentile. There are far

more high IQ individuals who are not members of Mensa than there are Mensans and this in itself could be seen as a flaw in the study. However, selecting members of Mensa was the surest way to reach individuals who had formally been assessed as having an IQ in the 98th percentile. It would have been quite problematic within the constraints of this research to recruit people at random and get them to take a two and half hour IQ test. One could argue, thus, that for this particular study, this self-selected convenience sample was adequate despite its limitations.

A second weakness was that all three research instruments were based on the self-assessments of the respondents and were likely to involve subjective perceptions or even co-creation of data between the researcher and the participants. In addition, the data captured only what the researcher thought was relevant to ask and what participants thought was relevant to say. There could very well have been pertinent information that was not revealed.

Thirdly, all participants were relying on their memories of distant events. As suggested by Martin et al. (2010), although they do not provide a totally objective assessment of situations, memories of feelings (episodic memory) are likely to be more accurately remembered than memories of facts (semantic memory). Sparta and Kinscherff (2013) suggest that, although recall of facts is not always accurate and can be influenced by time delay, as well as emotions that existed at the time of the event, perceptions and beliefs engendered by memories are psychologically

important. The study explored how delayed academic achievement had affected their lives of the participants, on reflection, and what feelings it had engendered in the past and engendered now.

In addition, it is acknowledged with hindsight that one question in the first questionnaire was poorly worded as “To what extent has your underachievement been or is currently a source of anger or sadness” and ended up being a ‘leading question’. It would have been much better to ask: “What feelings, if any, does your academic underachievement generate?” Also, because of the ways in which the topic evolved over time, all participants, rather than just those who took part in the second questionnaire and interviews, should have been asked about their family status. Furthermore, the issue of personality traits could have been explored better in the questionnaires.

Another flaw was that, by selecting for interview only participants in the second questionnaire, those who had not reversed their underachievement in adulthood were ‘discarded’ and their voice not fully heard. Yet, they were the ones whose story would have provided even greater evidence of the negative long-term effects of underachievement. An in-depth study of their circumstances is one that most certainly requires further research. The selection was made at a time in the research process when it was felt that the story of the late achievers was the one that needed to be further explored in order to give insights into the differences

between their various educational experiences. With hindsight, interviewing five participants from the first total sample and five participants from the sub set sample may have provided a more balanced view.

Finally and importantly, experts in psychology and special educational needs may feel that there was another dimension to the data that was omitted or misrepresented. They may feel that some of the conclusions are a little naïve and do not reflect the reality of what can or cannot be achieved within the constraints of the multi-cultural and mixed-ability mainstream education system in terms of providing support for gifted children.

What this research represents is only the voice of a sample of high IQ adults, members of British Mensa, who have experienced academic underachievement, and the researcher's own interpretation of their words. Because of the above limitations and, as mentioned before, it is conceded that the results and findings cannot be generalisable. They only applied to the individuals surveyed and different results may have been obtained with a different sample within or outside Mensa.

The scope of the study was limited because of being undertaken for the specific purpose of writing a doctoral dissertation. In an ideal world, many other aspects of this topic should have been explored but they had to remain suggestions for future

work, as explored in Chapter Eight when discussing the potential further research avenues for this topic.

3.7 Developing as a researcher

Very useful generic research skills had been acquired through completing a Master's by Research a few years before embarking on these PhD studies. In particular, data gathering and filing skills proved to be very effective. All the emails, questionnaires and interview transcripts were recorded and very systematically filed, both electronically and in paper form. This proved invaluable when analysing them and later when needing to find relevant quotations. Having a marketing background also helped when designing the questionnaires and making sure that the questions were unambiguous and relevant. Yet, as mentioned previously, there was one question that should have been asked but was not for the first sample (e.g. if they had children and, if, so, what were their experiences of education). In addition, one question in the first questionnaire was wrongly worded and became a 'leading' question. Another, asking participants to list their four main personality traits, proved too difficult to analyse within the resources constraints. However, making mistakes was part of the learning process and will help develop new strategies in future.

In addition, new skills were learnt. For example, through conducting the preliminary informal interviews it had become clear that one needs to be very skilled when

dealing with sensitive issues. This was the reason for attending a training course on interviewing skills and techniques to be better prepared for the formal interviews. It made it possible to learn how to handle the potentially emotional aspect of interviews and was instrumental in conducting those successfully.

Transcribing the preliminary informal interviews demonstrated how long such an exercise takes and it was therefore decided that it would be very worthwhile employing an agency to transcribe the ten formal ones. Whilst this did save significant amounts of time, it may have prevented becoming as thoroughly familiar with the contents of the formal interviews as with the preliminary ones. However, each of the recordings was listened to twice whilst reading the transcripts in order to be better aware of the tones of voice, pauses and silences etc. as the relevant points were being extracted. Overall, the transcription analysis did capture accurately the essence of the participants' answers and comments - which was confirmed by their approval of the transcripts - and employing someone to transcribe the recordings of the interviews was still worthwhile.

The open-ended questions in the questionnaires provided a vast quantity of data due to the response to the appeal and the interest in the study being much greater than envisaged. So did the interview transcripts. The data were also very rich and took a very long time to analyse. With hindsight, there may have been sufficient data by analysing half the number of questionnaires and, with the first set of

questionnaires, saturation probably occurred after about 80 or so. Alternatively, maybe the number of words allowed for each response should have been limited. However, one could argue that this high response rate confirmed the importance of the topic for the sample concerned and, therefore, was a positive element.

Indeed, everything respondents had to say was interesting and important. This made it difficult to stop reading the questionnaires and, subsequently, to select the quotations to go in the analysis of the results. In addition, many hours were spent extracting quotations from questionnaires only to realise that these could not be fitted into the dissertation because of the limited word count. Once again, it could have been realised when saturation point had been reached since, increasingly, the quotations were similar and no new theme was identified.

In other words what was learnt was that, in any future research to be undertaken, stricter parameters would need to be set in terms of the quantity of data to be collected and analysed to avoid the above-mentioned problems.

3.8 Conclusion

This chapter described the mixed research methodology, the research design and the methods used for this study with the reasons why these were selected.

It explained how the sample was chosen, how the participants were recruited and how the data were analysed. It then examined the limitations of the research process.

Furthermore, it highlighted some of the sources of bias present at the start of the process and how important it was to be very aware of them and to eliminate them. It also assessed the lessons learned about undertaking a study of this type and revealed that, not only the researcher influenced the research process but the research process had a significant impact on the researcher.

The methodology used and the evidence found by undertaking this study helped meet the aims of the research question. It is hoped that dissemination of the results and findings will alert special educational needs experts to the evidence and may lead them to make recommendations so that the needs of high IQ children to be catered for in future, including that further research may be needed.

The results and findings deriving from the methodology selected are detailed in Chapters Four, Five and Six. These are then discussed in Chapter Seven and conclusions drawn in Chapter Eight.

CHAPTER 4

First Questionnaire - Experiences of Academic Underachievement

4 FIRST QUESTIONNAIRE - EXPERIENCES OF ACADEMIC UNDERACHIEVEMENT

4.1 Introduction

This chapter examines the responses to the first questionnaire returned by 158 participants relating to their experience of academic underachievement in general.

After a short introduction it provides an analysis of the results, highlighting in particular issues relating to late identification of high IQ, perceptions of academic underachievement and its causes and the perceived impact of academic underachievement on adult life. It then attempts to explain the significance of these findings and to draw some conclusions. It achieves this by identifying which findings matched the literature, which items were highlighted in the literature but not mentioned by many respondents and which findings were not highlighted in the literature but revealed by the participants. The latter findings led to the conclusion that further data would need to be collected in order to uncover what may be new, greater insights into the long-term consequences of early academic underachievement amongst high IQ adults.

Chapter Five, via responses to a second questionnaire, examines the experience of the 50 participants who reversed, in adulthood, their earlier academic underachievement.

The aims of the research were:

- a) to explore retrospectively with a sample of high IQ adults their experience of academic underachievement or delayed achievement. Responses to the first questionnaires provided a very good starting point for this exploration by describing the extent and the background of the experience of early underachievement.

- b) To discover what they perceived the causes of this phenomenon to be. The answers given in the first questionnaire were extremely detailed in many cases and provided a great deal of information that tended to match quite closely what was revealed in the literature review.

- c) to investigate the long-term impact of the phenomenon on various aspects of their adult life. The responses to the first questionnaire provided a good illustration of the consequences, in adulthood, of early underachievement - very negative for 65 participants (41%). They also revealed that a nearly identical number - 64 participants (40.1%) - had returned to education in adulthood and, thus, reversed their underachievement at some point, with varying success and consequences for their life. This discovery led to further exploration via a

second questionnaire of the phenomenon of delayed academic achievement, as described in Chapter Five.

- d) to draw conclusions about the lessons that can be learned by educators, parents, policy-makers and government agencies from the experience of the participants in the study. Although this first questionnaire started to highlight some of the issues, it was only with the second questionnaire and the interviews that some clearer understanding developed.

4.2 Results from the first questionnaire

The responses to the questionnaire were striking for two reasons. Firstly, respondents seemed to have taken the questionnaire as an opportunity to reflect on their life and appeared genuine in trying to understand and explain their academic underachievement. Some answers were short and concise but the vast majority were very comprehensive and detailed.

Secondly, most of the responses were extremely well written, displaying a high level of literacy which did not seem to depend on the level of formal qualifications obtained. This could point to the fact that high IQ individuals may learn to write well through reading a large quantity of diverse materials - even if they do not demonstrate this ability through academic achievement. Indeed, they are known for

being voracious readers on a vast range of topics (Renzulli, 1988; Weber and Cavanaugh, 2006).

A few quotations taken from the participants' completed questionnaires were included after each chart from Figure 9 onwards in order to make their 'voice' heard more clearly.

The number in brackets at the end of the quotations reflects the order in which the participants responded to the article, rather than when they returned the questionnaire (some replied to the article to volunteer to participate in the study but may have completed the questionnaire at a later date). In addition, the terms 'respondent' and 'participant' are used interchangeably throughout.

Figure 6 reflects the fact that participants were asked to comment on the long-term effects of their academic underachievement, which means that, in order to be able to participate, they needed to be old enough to reflect on their adult life.

In terms of gender, the British Mensa membership tends to attract more males than females (approximately 60/40%). However, one may speculate that the slightly higher proportion of males (67/33%) responding to the appeal for the 30-50 age groups, as illustrated in figure 7, is due to the practical impact of their lack of

academic qualifications on their professional life having possibly affected more males than females.

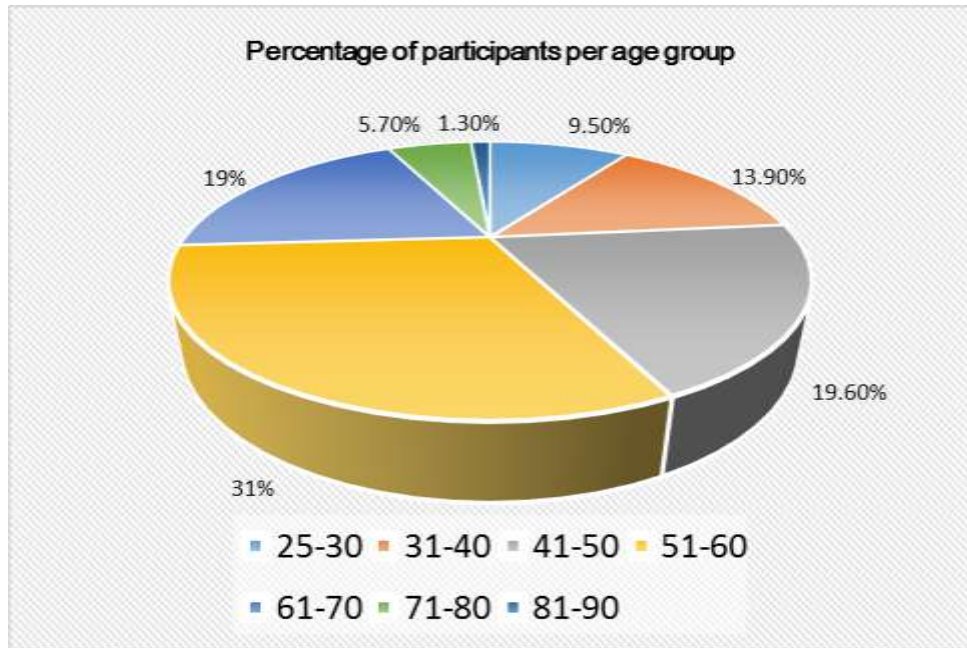


Figure 6: Age of participants (see appendix 16 for frequency distribution)

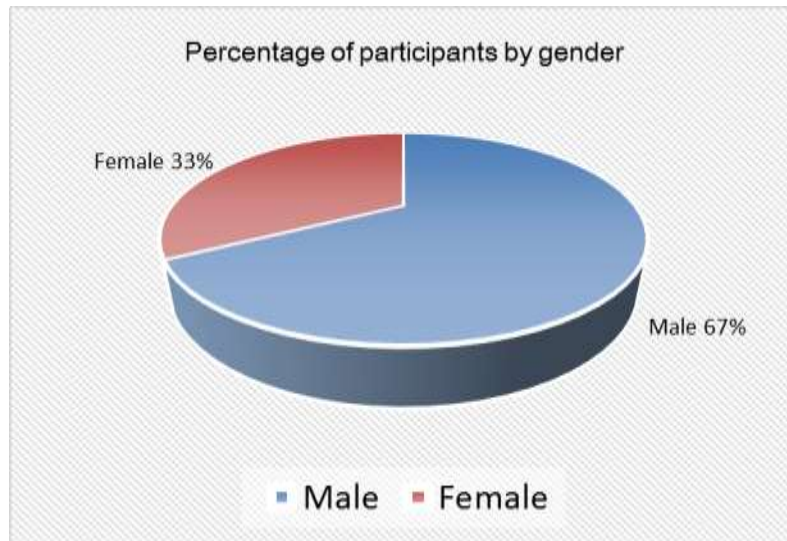


Figure 7: Gender of participants

4.2.1 Late identification of high IQ

Whereas the literature about high IQ individuals experiencing difficulties in adulthood concerns itself mostly with adults who were identified as gifted when they were children (Terman, 1947; Streznewski*, 1999; Jacobsen*, 1999; Bost*, 2011; Freeman, 1991 and 2010; Falck, 2013; Nauta and Ronner, 2013), this survey revealed that 97 (61.1%) respondents to the questionnaire discovered their IQ by passing the Mensa test between the ages of 21 and 40 and another 31.3% between the ages of 41 and 60.

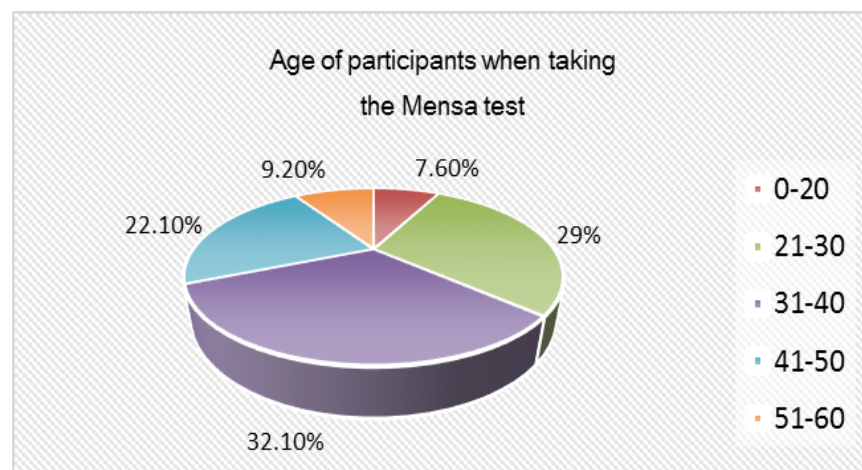


Figure 8: Age at which participants took the Mensa test and discovered their high IQ

(see appendix 19 for frequency distribution)

They were therefore never identified as gifted children and represent a sample of individuals not hitherto discussed in the literature. As such, their responses provide data that is yet unexplored and therefore potentially an original contribution to new knowledge.

All respondents took part in the survey because they felt that they had underachieved academically despite their high IQ. Many suggested that not knowing at the time that they had a high IQ may have contributed to their difficulties. Respondents said that their life experiences had made them feel that they were more intelligent than many of the people they were mixing with and working for and who had academic credentials. However, since they had no formal proof of this intelligence - such as high academic qualifications, for example – they felt that passing the Mensa test had given them the acknowledgement they needed. It is unlikely that they would have taken the test unless they had a hope of passing it, yet most respondents said that the fear of failure engendered by past experiences led them to keep their endeavour a closely guarded secret. Reasons given for taking the Mensa test were all about proving something about their intelligence either to themselves or to others as shown in Figure 9.

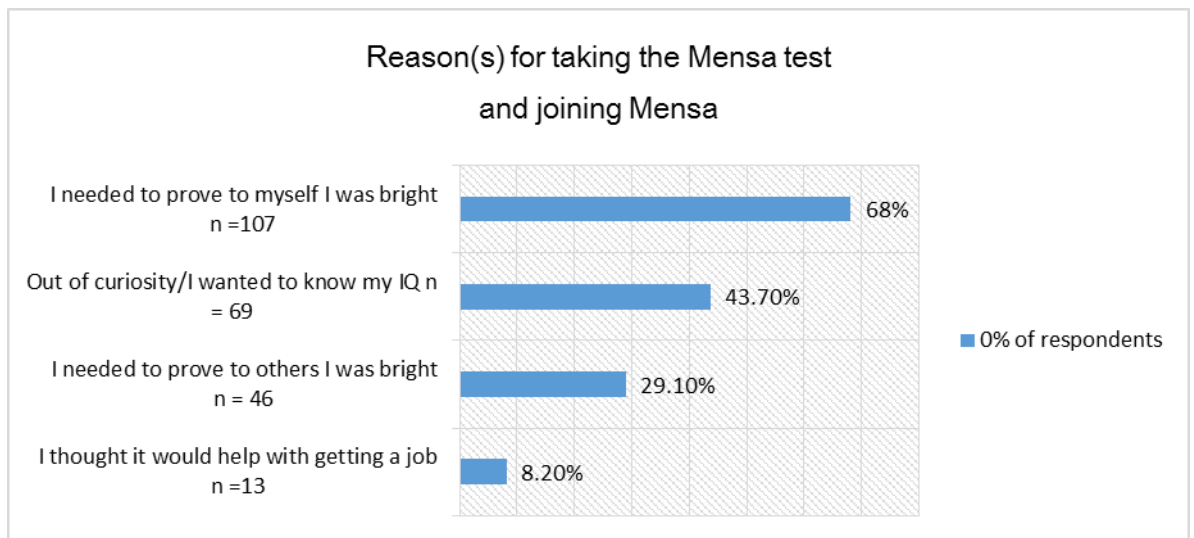


Figure 9: Reasons for taking the Mensa test and joining Mensa

Some participants gave more than one reason which is why the total is not 100%.

The main reason given by a large majority (107 participants i.e. 68%) for taking the supervised test and joining Mensa was a need to prove to themselves that, despite their lack of academic qualifications and credentials, they were ‘intelligent’ as illustrated in the statements below:

I needed to prove to myself I was bright. (68% n=107)
<i>I needed the confirmation that I was not an idiot. (No 54)</i>
<i>I wished to prove to myself that I was not a failure after all. (No 107)</i>
<i>I joined because I needed to prove that I am intelligent regardless of qualifications. (No 72)</i>
<i>I applied to join Mensa because in spite of the disastrous turn my life had taken, I still felt I had intellectual ability on which I could build. (No 57)</i>
<i>I had always had confidence in my own intelligence, but I was starting to doubt myself as my (then) boyfriend and his friends constantly belittled me by making snide remarks. (No 146)</i>

This can also be assumed of the 69 (43.7%) who took the test out of curiosity as follows:

I took the test out of curiosity. (43.7% n= 69)
<i>I took the test out of idle curiosity after I found a book on IQ which my son had left lying around. (No 78)</i>
<i>I needed to either challenge or confirm what I had been told and experienced, i.e. that I was ‘thick’, to get some sort of measure that would tell me where I stood. (No 39)</i>
<i>I was looking for an answer as to why I was bored so often with different jobs I had started. (No 49)</i>
<i>I couldn’t understand why people did not see things as I saw them and wondered if I was thick. Did the test to see. (No 93)</i>
<i>Since early at school it was obvious that I was brighter than the average, and I had been wanting to see if I was Mensa standard for years. Since then I have found out that I am even smarter than that – I scored in the top 1% in the Mensa tests, and am now a member of other High IQ societies with higher IQ admission criteria. (No 98)</i>

The need to prove it to other people in general was also important for 46 i.e. 29.1% of participants and to employers too, as indicated in the responses below.

I needed to prove to others that I was bright. (29.1% n= 46)
<i>I really did it to prove my boss wrong and prove that I wasn't as stupid as I had been led to believe. (No 28)</i>
<i>My then boyfriend (now my second husband) is a science graduate and although he has never ever put me down, I did feel inferior to him as I had no other way to "prove" my basic intelligence to him. (No 96)</i>
<i>I can't spell but if someone comments on my spelling now I just think to myself "I bet you haven't an IQ of 158" and I can just ignore them. (No 69)</i>
<i>I was surrounded by people to whom qualifications implied superiority. I knew that I was more intelligent than a good deal of them and wanted to 'impress' them! (No 9)</i>

However, those who hoped that becoming a member of Mensa would help with job prospects were generally disappointed as they found that employers are very suspicious of someone who claims to be a member of Mensa but has no academic credentials. Being a member of Mensa does not seem to be a substitute for formal qualifications for the majority of employers.

I thought it might help me get a job. (8.2% n= 13)
<i>I had heard that there was a Mensa job club which I thought might help with a complete change of career. It didn't. (No 120)</i>
<i>I felt that, if I passed, I could list membership on my CV, which might single me out from other job applicants with a 2:1 degree. I am not sure it does. (No 18)</i>
<i>I did benefit once from having Mensa on my CV. I was called to interview on the strength of that, and obtained the job. (No 157)</i>
<i>I soon learnt to not include my Mensa membership on my CV. Ironically, although employers are happy to exclude people from jobs on the grounds of lack of education, many such people also see Mensa as elitist! (No 27)</i>

Many respondents quoted that mentioning to people that they were a member of Mensa often attracted negative reactions (disbelief or scorn) and that they usually kept this fact to themselves or to very few people in their social or professional circles. In the same way as not having any tangible proof that they were intelligent had been a stigma for them, discovering fairly late in life that they had a high IQ – although it was a great confidence booster in many ways – became another stigma in some cases.

Interestingly, one participant used his Mensa membership as a way of not getting a job as he felt it would be unbearable to have to carry out ‘mind-numbing’ tasks all day.

I was unemployed and forced to apply for a variety of very low paid menial jobs. I wanted to be able to put it on applications for jobs that I didn't want to ensure that I would not get an interview. (No 55)

One participant mentioned that people had not heard of Mensa and, therefore, failed to be impressed.

Having now become a member, I realise how many people haven't heard of Mensa, so my ability to 'show off my intelligence' hasn't really been used! (No 7)

4.2.2 Perceptions of academic underachievement and its causes

Figure 10 below shows that 55 respondents (35%) revealed that they had left the education system with low level or no qualifications at all and another 35 (22.2%) with poor ‘A’ levels or equivalent. This means that more than half of the respondents - 120 (57.2%), despite having an IQ in the 98th percentile, seem to have coped poorly with the demands and requirements of the school curriculum or at least the way it is assessed.

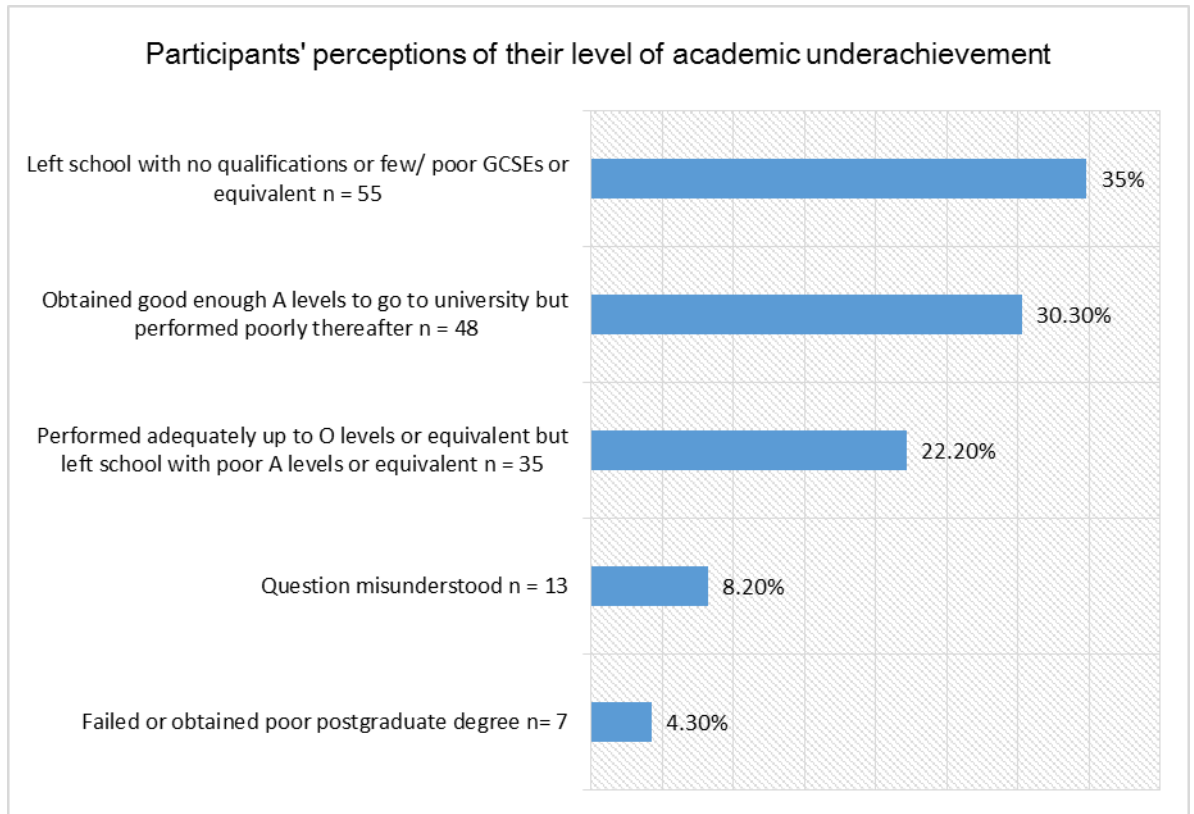


Figure 10: Perception of the participants' level of academic underachievement

(see coded transcript at appendix 17)

Below are a few quotations from the questionnaires relating to Figure 10.

<p>I left school with no qualifications or a few GGCSEs or equivalent. (35% n = 55)</p>
<p><i>I went through primary school with no particular belief of being academically capable in any way, and with no reason to challenge this assumption. That continued through to high school, where I left having been only entered for 4 G.C.S.Es. The highest G.C.S.E. mark I achieved was a D. (No 39)</i></p>
<p><i>I passed my 11+ and was awarded one of a few free places at xxxxx School, a well-regarded local independent school, yet my O level results were mediocre and so I did not go into the sixth form, unlike most others who did not seem as bright as me. (No 25)</i></p>
<p><i>I was a star pupil at primary school. At secondary school I started in top sets for everything yet still only left with 3 good GCSEs. (No15)</i></p>
<p><i>I left school with only 2 GCE 'O' Levels and my last school report stated 'This child is too lazy to ever make anything of himself.' (126) Note: Obtained a degree at 29 and an MBA at 43 and has had a very successful career.</i></p>

Over a third of participants left school with no or few qualifications, some having performed poorly from the day they started school and others falling by the way side as years went by, as shown both above and below.

<p>I performed adequately up to O levels or equivalent but left school with poor A levels or equivalent. (22.5% n = 35)</p>
<p><i>I did end up with 9 (1A, 4B's, 4C's) which is a good result, but it was less than I could have achieved. I then studied 3 A levels, dropped one after a year, failed another (and again on re-sit), ending up with one at grade E – so all but a complete failure! Ask my parents – they'll confirm that "could do better" was scrawled all over my school reports for years! (No 35)</i></p>
<p><i>I passed eight O levels, 6 above grade C and only one grade A and one B. I stayed on at sixth form and took Physics, Maths, and Computer Science, dropping all but Physics and only achieving a grade E in that. (No 105)</i></p>
<p><i>I studied for 5 A levels in the sixth form. I failed all but 2, getting a C in one and an E in the other. This completely destroyed my confidence until I passed the Mensa test and finally obtained an MA in Philosophy with the Open University at the age of 38. (No 45)</i></p>
<p><i>I was an overachiever at primary school. My parents on many occasions were told by teachers that I would be "going to Cambridge" etc. By the time I had started secondary education the phrase most quoted on my school reports was "rests on her laurels". I was good at tests, and went through school doing as little as possible to get by. I honestly don't ever remember revising for exams. I rushed my homework and coursework, but always scored OK. I got good grades for all my GCSEs, but A-Levels were a disaster and I left one of the best schools in the county with 2½ bad A-level grades. (No 56)</i></p>

Just under a third reported having secured a place at university, but then encountered difficulties with their undergraduate studies.

I obtained good enough A levels to go to university but foundered thereafter (30.3 % n= 48)
<i>I always coasted' and did the bare minimum to pass exams. I obtained decent grades at GCSE without doing any work, less good at A level but enough to go to university on the course I had chosen (computer science) but I failed my first year exams and repeated the year. I failed second year exams, did not pass the re-sits and was finally chucked out. (No 158)</i>
<i>I managed to get the grades to go to college but I failed my first year exams. Passed on re-sit but I failed second year exams and did not pass on re-sit. (No 97)</i>
<i>I was an over-achiever at primary and junior school, and I was a very successful O level student, particularly in my chosen science, biology. I then did A levels in all sciences and obtained 4 good A levels but I dropped out of university after two years as I found it quite hard to study and had become very bored with it all. (No 132)</i>
<i>I dropped out of university after two years and did not complete my degree. (No 132)</i>
<i>I did an Art degree and obtained a very mediocre 2:2. I feel as though my whole academic career got more mediocre the longer it went on. (No17)</i>

13 participants (8.2%) commented on their personal or professional underachievement as opposed to their academic underachievement which is the focus of this study. Their responses were therefore not taken into account here as the question was misunderstood.

Despite having obtained undergraduate and post graduate level qualifications seven participants (4.4%) felt that they had underachieved academically – see below.

I failed or obtained a poor postgraduate degree (4.3% n= 7)
<i>I only passed my degree with a 2.1 and I did not complete my PhD – I never dealt with the necessary amendments. (No 113)</i>

I did not get a first in my degree but a 2:1. I did not do my first degree in Oxbridge but I started my PhD (D. Phil) there. Did not finish it. (No 98)

I am sad that I have achieved nothing noteworthy with my life so far. (No 3) Note: This despite having obtained 2 undergraduate degrees + 2 Masters Degrees and speaking four languages.

What is striking from the data collected for Figure 10 is two-fold. Firstly, the participants' interpretation of academic underachievement was very subjective and relative – ranging from leaving school with no qualifications to obtaining a third class degree from the University of Cambridge or not completing a PhD. Many people would be pleased with what some of the above respondents have achieved but, because these achievements fall short of their own expectations, their perception is one of academic underachievement.

Secondly, if we assume that the academic performance of individuals with a high IQ should be superior, the data from Figure 10 revealed that there was a very large discrepancy between the assumptions generally made about academic potential and attainment – much larger for this sample than anything mentioned in the literature.

When asked what they perceived the reasons for their academic underachievement to be, respondents quoted the reasons in Figure 12 below. Several reasons were given by the same individuals which is why the total does not add up to 100%.

4.2.3 Perceptions of academic underachievement and its causes

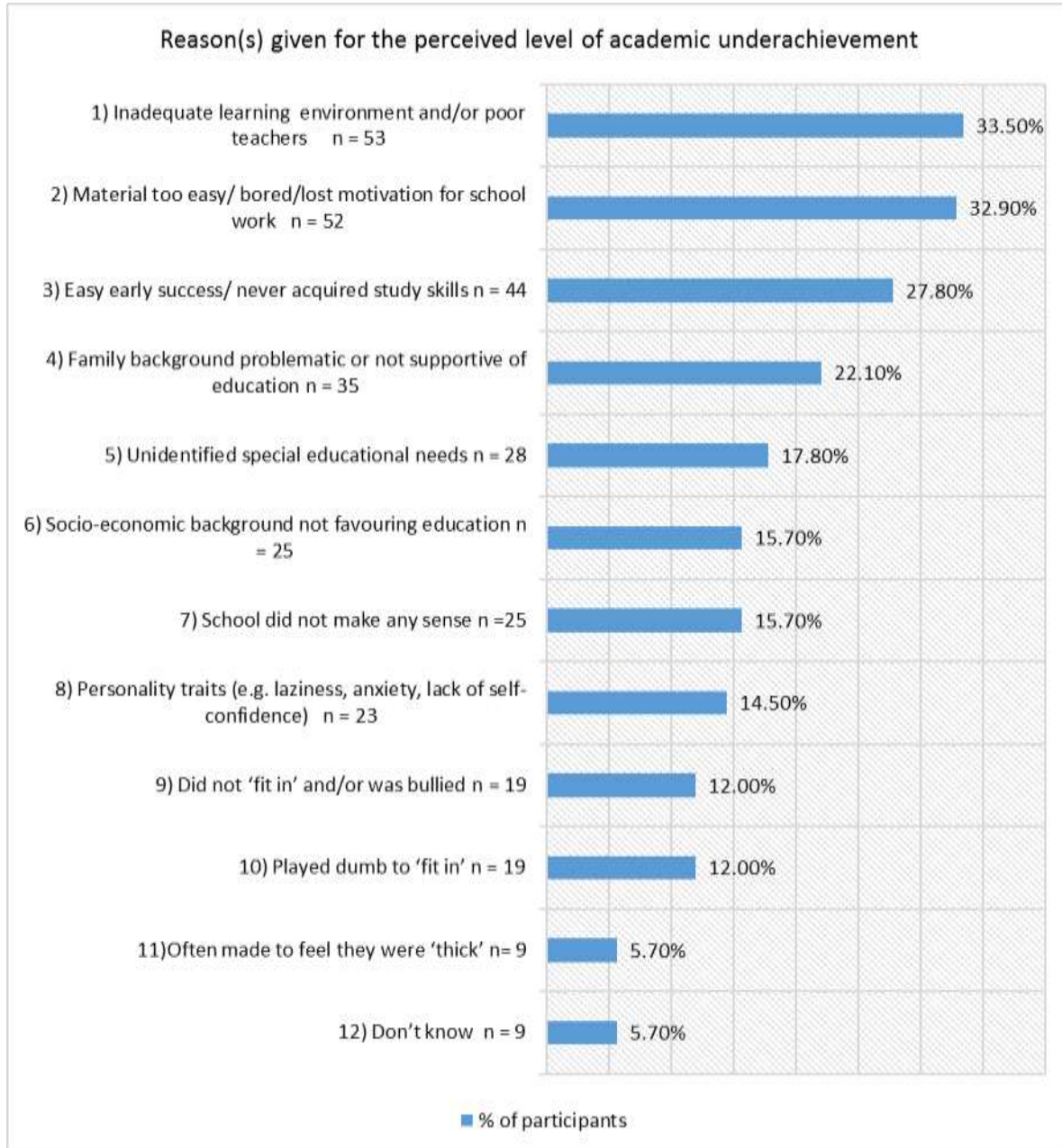


Figure 11: Reason(s) given for the perceived level of academic underachievement

The quotations below relate to each of the eleven themes which were identified when analysing the responses to the questionnaire and illustrate the perceptions participants have of what may have caused their underachievement.

Apart for items four, six and eight, the reasons given for the perceived causes of their underachievement appear overwhelmingly to be related to the school environment. The two reasons quoted the most relate to the inadequacy of their educational environment experience and poor teachers (53 respondents i.e. 33.5%) and a curriculum that was too easy and leading to boredom (52 respondents i.e. 32.9%). This was followed closely by poor study skills caused by lack of challenge in mastering the syllabus (44 respondents i.e. 27.8%). Home and socio-economic background or personality traits were not perceived to have played as great a role for many (25 i.e. 15.70%).

The learning environment was inadequate / I had poor teachers. (33.5% n = 53)
<i>Systemically, one was prevented from achieving one's best by the system's predetermination that every pupil must stay within his/her own set (age group) unless he/she failed and had to repeat a grade. It was systematic dumbing-down, where learning levels were constrained by the abilities of the slowest/laziest/least capable student in the class. (No 54)</i>
<i>Because I was "good", I had to sit at the back with another quiet girl and was expected to keep quiet until the others caught up. (No 6)</i>
<i>Teachers did not seem to understand that I wasn't lazy, I was just bored. Poor schoolwork doesn't often puzzle teachers, they just think you're stupid or lazy (at least mine did). (No 92)</i>
<i>I had teachers taking A level students with only an 'O' level in the subject themselves. How could I be motivated to learn from them? (No 210)</i>
<i>My maths teacher told my Mum there was no point in me sitting the higher paper. Mum disagreed and I sat it and I got a B grade GCSE. (No7)</i>

Teachers always seemed concerned I didn't use my potential but never explained how I could do this. (No 125)

I wish teachers had stopped to think, here was someone with high IQ coming top in almost everything in the first year school exams, why the downward slide? Although the comment "could do better" was often written, I don't remember being shown how, or in what way. I feel that the school I went to could also "have done better". (No 103)

I went to a good grammar School in a very prosperous area. Unfortunately, this became a comprehensive school when I was 14. Three schools were combined and it was chaos. All the best teachers left. I left school after taking 'O' Levels. (No 73)

My dad had bought all the Janet and John books and I had read them all and moved on way before starting school. I was proud of my reading ability. On the first day, my teacher called us up one at a time and the first Janet and John book was open on her desk. "I've read that" I told her. "No you haven't" was the reply! I told her I definitely had and proved it by picking it up and racing through the first few pages. She got the second book out of her drawer; "I've read that one, too" says I, "I've read all of them". Her response still haunts me to this day "Well then", she said, "you'd better sit at the back and listen to the others until they catch up with you". And that is exactly what happened. From that day on I felt let down, crushed and totally deflated by the education establishment. I cannot remember a single teacher who recognised my ability and gave me more challenging work. (No 218)

This teacher was very good and would give the class the lesson which we had to do and then she would add a couple of more 'in-depth ' questions for me to do in addition. She did this via a lesson sheet so the rest of the class didn't see I was doing anything different from them. This kept me challenged and interested. The next year I had a different teacher who just added extra homework i.e. he increased the workload rather than the challenge, quantity not quality and I got bored with it. There were no changes after a discussion with him so I told him to stop the extra work as it wasn't achieving anything. (No 77)

Second to inadequate learning environment, and strongly related to it, was lack of intellectual stimulation leading to boredom for a third of participants as shown below in the quotations extracted from the questionnaires.

It was too easy. I was bored and lost motivation for school work. (32.9% n = 52)

I underachieved due to lack of stimulation in class. I was bored and never finished class work which I found pointless with most teachers. (No 158)

I was a high flyer at school, usually about eighteen months ahead of my chronological age group– I had taught myself to read at age two. However, I do not feel that I was sufficiently challenged or stimulated. A typical lesson for me was spent gazing out of the window while my class mates got to grips with a concept that I had grasped within the first few minutes of the lesson. I was bored! (No 48)

At primary school I was always first to finish class work – my reward was to ‘play quietly’ or to draw. I think I gradually got very bored and demotivated. I think that from age 13 onwards I started giving up and underachieving. (No 97)

Progress through the syllabus far too slow. I remember day after day of sheer boredom and I switched off. (No 210)

It is fair to say that I did not work particularly hard at school as bored most of the time. I sailed through my ‘O’ Levels on the back of what I remembered from lessons with little help from any additional studying as everything seemed so easy. (No148)

When I had finished my work I had to go and help the others. I hated it. What use was that for me? So I started to hide that I had finished and used the time to read books I brought into school with me. (No12)

Throughout junior school I was essentially in the top class, without effort. I did well with science because in my experience I did not have to learn anything. I could work it all out as I read the question. (No 42)

Siaud-Facchin* (2002); Gross (2004) and Hargrove (2010) posit that, if they are not provided with extra stimulation, gifted children will soon find school to be boring, irrelevant and meaningless. This in turn can result in their developing a disdain for education and educators which may lead to academic underachievement. Participants confirmed that they gradually lost respect for their teachers and the educational establishment.

Closely related to boredom and lack of stimulation was item 3: lack of study skills. Over a quarter of respondents felt that their underachievement was caused by the fact that they had never learnt to learn or work as everything was so easy. This lack

of study skills became a problem at the higher levels of school or university and was given by participants as a cause of their underachievement as expressed below.

Early success means that I never acquired study skills. (27.8% n= 44)
<i>Throughout my school career up to 'A' level, I did not need to work hard to achieve good results – it all came too easily. At A level and university I needed to apply myself to learning and had not learnt how to do that. (No 40)</i>
<i>I passed exams by cramming just before them and do not remember ever 'working' for them. (No 96)</i>
<i>I am not sure why I did so badly except that when it became harder I did not know how to study. I never had to before. (No 118)</i>
<i>My parents were told at parents evening 'don't worry she'll sail through', so I stopped putting in the effort. (No 210)</i>
<i>I was able to come top of my class at all subjects at school without doing any work at all. I also didn't have to do any work to pass my A levels or the first year of my degree. I then suddenly found myself in the final year of my degree never having had to study, not knowing how to study and having no clue how to even go about my research project. (No 203)</i>
<i>When it became harder, I did not know how to study. I never had to before. (No 105)</i>
<i>I recall a lack of challenge – it was easy to understand and get by without working so I never really developed the habit of working. (No 101)</i>
<i>I did not learn to concentrate and give concerted effort over long periods at school. I mastered all school material easily and quickly, even at advanced levels, and so did not learn this skill. I suffer from this to this day. (No 98)</i>
<i>I never learnt to study or work hard and when I got to university I could not hack it. I could not cope so did a lot of partying instead to pretend I was doing fine – not surprisingly with disastrous results. (No 158)</i>

As highlighted in Chapter Two, Gross (2004) and McElwee* (2010) propose that if high IQ children are not challenged in the classroom early on, they find the work too simple and, as a result, become bored quickly, do not develop good work habits or positive feelings towards school. If they master effortlessly the material that is being covered in class and this situation continues for several years, they learn that school

work does not require any effort and, therefore, they do not acquire any kind of study or learning skills. Underachievement is their way of responding to what they feel is unrewarding work. In some ways underachieving almost becomes a choice they make.

Beyond the school environment, 35 (22.1%) respondents quoted their unsupportive or difficult family context as the reason, or of one the reasons, for their academic underachievement. This highlights once more that environmental factors and in particular regular school attendance and parental support play an important part in academic attainment (Cutrona et al., 1994; Deary et al., 2007; Freeman, 2013). The respondents' comments below show that, even in an unproblematic family environment, parents under-valuing formal education and qualifications can lead to low aspirations and levels of academic achievement, even for a gifted child and especially if s/he has not been identified as such.

My family background was problematic or not supportive of education. (22.1% n = 35)
<i>My stepfather didn't want me to progress beyond the abilities of my step-siblings ("his" kids) although it was clear that I had the ability to do so. My step-siblings were younger than me so mine were the only earnings available for 'sharing'. (No 112)</i>
<i>Friction in extended family at an early age led to low self-confidence. (No 155)</i>
<i>My academic ambitions were tempered by the fact that I knew from an early age that my father was not keen on people going to university generally and made disparaging remarks about a cousin of mine who stayed on at university to do a PhD. (No 47)</i>
<i>I still got 4 A levels, so thought I might as well go to university. Unfortunately the 'advice' I got from my parents, especially my father who was only interested in not having to spend any of his money, was to go to the local polytechnic instead. I got through the first year without doing any work, but the second year I was not so lucky. I was getting constant nagging from my father, that I was 'not bringing in any money, and he was still supporting me' so I started looking for jobs instead of studying. I duly failed my second year. (No 132)</i>

My parents were quite surprised when I went on to higher education, not an option open to either of them: "Some of the biggest idiots my father knew had university degrees". (No 120)

My parents divorced when I was in my last year at school and because of the upheaval etc. my exam results were poor and I left school. (No 165)

When reflecting on the reasons why they may have underachieved, many respondents said that they realise with hindsight that their high IQ means that they probably had special educational needs. What is illustrated below, are comments from individuals referred to in the literature as ‘twice exceptional’ (Cline and Schwartz, 1999; Webb et al., 2005), that is to say individuals with a high IQ and some form of learning difficulty.

I believe I had unidentified special educational needs. (17.8% n = 28)

I may also have some learning difficulty as I could not concentrate in lectures or remember anything for exams. (No 158)

I have always found it almost impossible to learn things by rote or to remember things. My mind goes completely blank in exams. (No 226)

I am mildly dyslexic and therefore could not spell. This seemed to be a big problem at school. (No 69)

My special needs were not identified at school. Years later I was diagnosed as dyslectic (sic). (No 93)

Since sending you my questionnaire I have been formally diagnosed as having "Asperger's traits" as well as dyslexia. (No 68) - comment received in an email a year after the 42 year old participant had completed the questionnaire.

I believe I show some Asperger's traits. (No 58)

I am particularly angry with an inflexible education system that penalises potential high achievers but sees fit to provide additional effort to pupils not suited to academic achievement to the detriment of both parties. (No 38)

I felt disillusioned from a very young age that a child identified as low-ability received help, but my high-ability was not worth the help. (No 43)

A disadvantaged socio-economic background is often perceived as one of the reasons for academic underachievement (Russell International Excellence Group, 2013). In this study, it is reported by 25 respondents (15.7%). As shown by the very last comment in the box below, even those who ‘make it’ sometimes believe they should not be there and quit.

My socio-economic background was not supportive of education. (15.7% n= 25)
<i>The option of getting a grant to go to university wasn't 'real'. It would not have been enough and it didn't bring cash into the family. (No 112)</i>
<i>University was still perceived as for the sons of gentfolk and not a realistic aspiration for working class kids like me. (No 54)</i>
<i>I am very aware that as a working class child from a tough housing estate in the West of Scotland, high intelligence was, concurrently, both a blessing and a curse! (No 85)</i>
<i>The advice I received from EVERY quarter, including my teachers, was 'get a trade'; plumber, electrician, carpenter, because 'with a trade, you'll never be out of work.' There is no denying the fact that being brought up in a council house to poor working class parents ruins life chances. (No 78)</i>
<i>My father died when I was ten days old so I grew up in a very financially poor household. Education was a luxury. (No 55)</i>
<i>I went onto study for an access course at 28 as a result of which I was offered a place at Hughes Hall, Cambridge to study history. I left after one week as I stood out like a sore thumb. I became convinced that there had been a mistake or that they were using me to provide an example of their positive discrimination policy. Not only I was a working class boy but I had come through an access course. There was nobody to advise me at the time and my experience confirmed what people in my social circle felt about going to university – never mind Cambridge - as something 'above my station'. (No 39)</i>

Another 25 (15.7%) reported being puzzled by the purpose of going to school and having wanted the process to end as soon as possible. Boredom and lack of appropriate intellectual stimulation is perceived here again as an important factor as illustrated in the following quotations.

School did not make any sense. (15.7% n= 25)
<i>I loathed school from the very first day, and the only prospect I looked forward to was getting to the end of this process called 'education' or, as I prefer to call it, 'schooling'. I could read, write and count quite fluently before starting school, so it seemed rather irrelevant to me. My mother tells the story that, after my first day at school, I announced, "I don't want to go there again – I did not learn anything". My attitude to school was that of a soldier in the trenches in the First World War – I thought only of surviving to the end of it. All my energy was spent trying to sustain myself in the face of the onslaught." (No 20)</i>
<i>I always doubted my abilities when in school. Despite being able to understand things quickly I also thought there must be something wrong with me felt it could not be "that simple". If it was, what was I doing there? (No 101)</i>
<i>I went to the local girls' grammar school. I found the work there boring and slow; the constant adherence to pointless rules tedious in the extreme; and a total mind-numbing insistence on conformity at all costs gave me no outlet for my creative instincts. What a waste of my time! (No 6)</i>

A relatively small percentage of respondents quoted personality traits as their perceived cause of underachievement. This will be investigated further in Chapters Five and Six.

My personality traits contributed to my underachievement.(14.5% n = 23)
<i>I'm fairly disorganised which probably doesn't help. (No 55)</i>
<i>I was brought up to be quiet and self-effacing and not to aim too high, and I think a lot of that was a product of the time I was born into and my lower middle social class. (No3)</i>
<i>I am unassertive, passive, timid, pessimistic – not a great combination for success. (No 115)</i>
<i>In her effort to make me modest and unassuming, my mother made me shy, insecure and unaware of my intelligence and (possibly attributable to no one but myself) emotionally unintelligent. (No 71)</i>

Bullying and 'not fitting in' because of being seen as 'too smart' ('smart-arse', 'know-it-all', 'clever clogs', 'geek' and 'nerd' were some of the words used by respondents) was mentioned by 19 (12%). This reflects the 'hidden handicap' caused by their difference referred to by Siaud-Facchin* (2008). The long-term impact of bullying on

the individuals concerned was significantly negative in all cases. As suggested by Hargrove (2010), high IQ children may end up hiding their ideas in order to fit in as they need, like most people, to feel that they belong to their peer group. They stop expressing their thoughts and ideas for fear of being mocked and this could be why they fall by the wayside and go undetected or unsupported.

I did not fit in/was bullied. (12% n = 19)

I entered the Secondary School with eight boys from my previous school and I was the only one of them to be placed in the "A" or Top class of first year. This isolated me and I became the target of a bullying campaign in which I was called names every single day for the entire first school year and often physically attacked as well. This experience affected many of my decisions in life thereafter. I learned that being clever was better if hidden. (No 104)

I was too scared to put my hand up in class as I feared the consequences from the other girls afterwards. It wasn't considered "cool" to appear intelligent. This still affects me today. (No 17)

I had limited social and evaluative skills as a child, leading to bullying in early school life. To some extent being the continual recipient of bullying for being a 'smart-arse' turned me into a loner, and cut me off from influences that might have led me into a better path. (No 197)

As shown below, another small minority (19 i.e. 12%) found different ways of hiding or distracting others from their intelligence in order to be accepted by their peers. The experience was more pleasant for them than being bullied but perhaps the long-term results for their academic attainment was not much better than that of their bullied counterparts.

I played dumb or acted as the class clown to fit in. (12% n = 19)

Because I seemed to be able to finish my work very quickly and ahead of the other two children who were considered "clever", I used to hide it and try to appear to finish along with the crowd. (No 6)

I discovered that I was quicker witted than most and could see the funny side of nearly everything and my comments and remarks were acknowledged by my peers as funny. I think subconsciously I used this to earn my right of passage. Of course doing this earned me friends with the pupils, but I lost ground with the teachers with whom I had always been on excellent terms. A result was that academically I fell behind. (No 42)

I became the class clown, always more daring, rude and belligerent towards the teachers than anyone else. My school reports went from amazing to appalling. Yet, there was never any effort to get to the bottom of my problems or to understand my changed behaviour, I was simply branded a bad apple. (No 222)

Nine respondents (5.7%) quoted that other peoples' attitude towards them caused them to believe that they were unintelligent.

I was made to believe that I was thick. (5.7% n = 9)

I just spent so many years being told I was the 'thick one' that I came to believe it in the end. (No 39)

Because so many things seemed so simple and obvious to me, I could not understand why pupils spent so much time on them. This made me believe I must be stupid because I could not see things others could. (No 205)

Until I passed the Mensa test I always thought I wasn't very clever. (No 69)

My failure at secondary school to do well and the debarring of my application to University led me to believe I was quite dumb. (No 42)

Nine respondents (5.7%) felt unable to identify why they had underachieved academically or commented on their personal or professional underachievement as opposed to their academic underachievement.

In the answers to the questions corresponding to Figure 13, participants stated what sort of impact their academic underachievement had had or was currently having on their life.

4.2.4 Perceived impact of academic underachievement on adult life

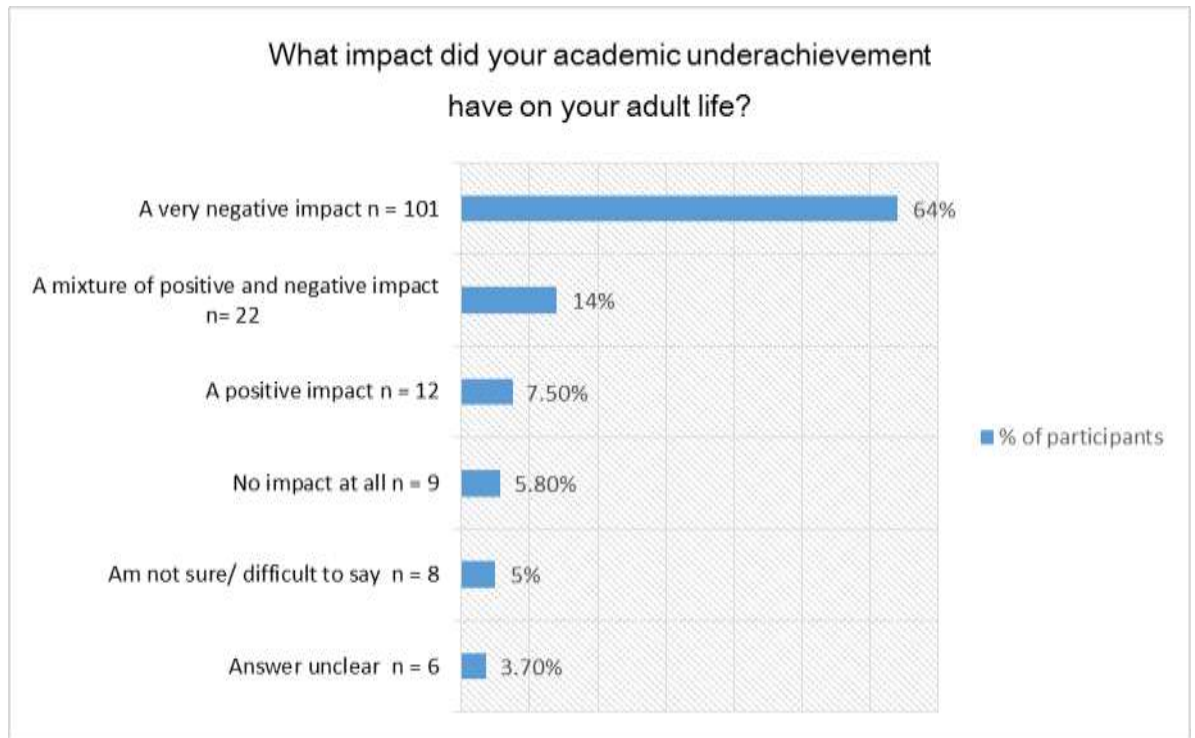


Figure 12: Impact of academic underachievement on adult life

101 respondents (64%) felt that their lack of academic achievement had had/was having a very negative impact on their life.

Reasons given for this as shown in Figure 14 were the practical and financial impact of their lack of academic credentials but also the serious personal and emotional impact of their feelings of inadequacy.

Of the 43 respondents (27.3%) who quoted no impact, a positive impact or a mixture of positive and negative impact of early academic underachievement on adult life,

reasons given were mostly that it had allowed them to follow a different path which had brought its own rewards.

Yet, the very same respondents often mentioned that, even if they had been successful later in life academically or professionally, this early academic underachievement was still, somehow, an important and emotive issue for them, a source of disappointment and/or sadness generated by their feelings, if not of failure, of 'falling short of potential'. They had felt important that, as a way of compensating for their own underachievement - even if it had not been very detrimental to their life - their children had a better educational experience and 'letters after their name', expressing perhaps some regret that they did not have any themselves.

The majority (101 i.e. 64%) of the respondents said that there was a very negative impact of early academic underachievement on adult life and their reasons were given were as follows:

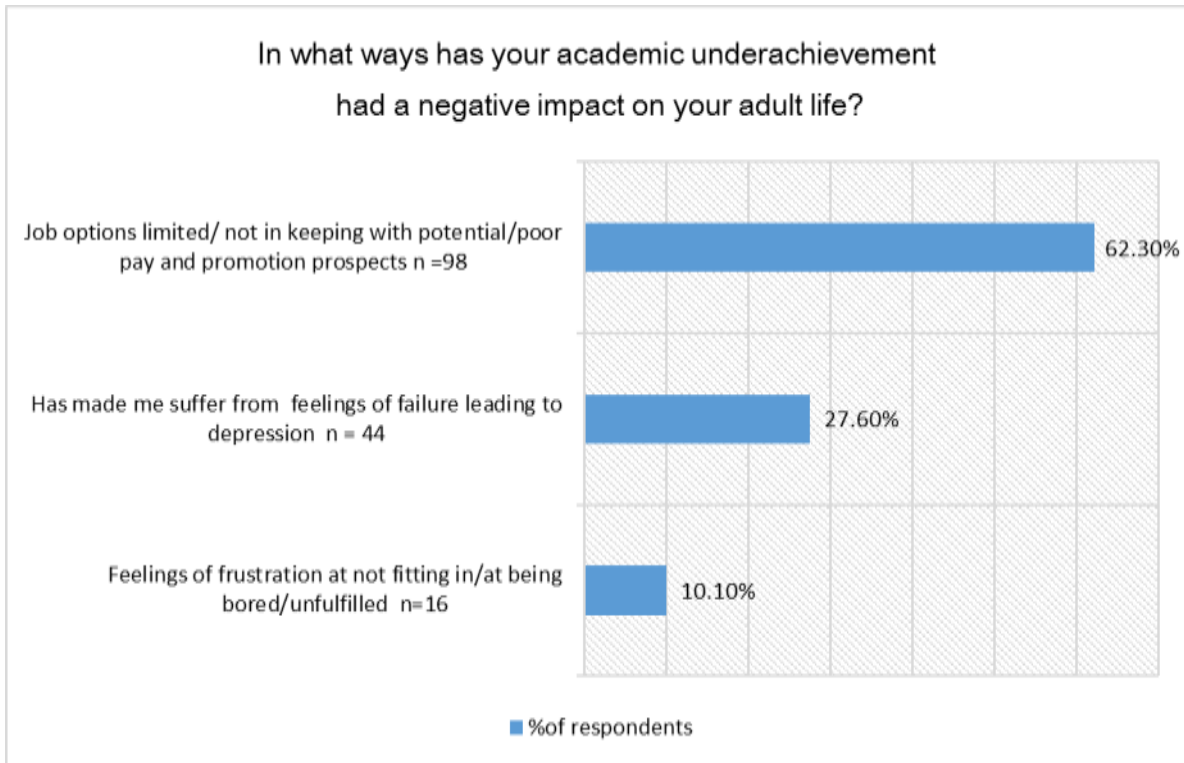


Figure 13: Negative impact of early academic underachievement on adult life

No one can know whether the participants’ life would have been better with academic qualifications. However, their perceptions are expressed as follows.

<p>Job options have been limited/not in keeping with potential/poor pay and promotion prospects. (62.3% n= 98)</p>
<p><i>My underachievement had a negative impact in my earlier years, and I am sure that it took many more years to achieve a good level of earnings and a more satisfying job than it would if I had done myself justice at school. (No 25)</i></p>
<p><i>Certainly on my career with xxx my lack of academic qualifications had a negative effect. I went as far as I could without having more ‘O’ levels, ‘A’ levels, a university degree and a professional qualification. (No 41)</i></p>
<p><i>My underachievement has been negative in that I was unemployed through most of my 20’s, and obviously that has affected my long-term financial situation. (No 57)</i></p>
<p><i>I missed out on getting a well-paid job at a younger age, and I missed out on getting a mortgage at a younger age. (No7)</i></p>

<i>Unfortunately, although I am now making up for my earlier failures, this is also at the stage of my life when I am having children and having to work as the sole breadwinner, putting a great demand on my time and strain on my resources. (No 93)</i>
<i>My performance in my jobs has always been highly rated, but lack of a degree has made getting a foot in the door difficult. (No 72)</i>
<i>It is hard to persuade employers you are clever when you have such a poor academic record and there are so many others less intelligent but with degrees. You can only do menial jobs which make you feel even more like giving up and staying on the dole. (No 158)</i>
<i>With qualifications I could have had much higher earning potential. (No 144)</i>
<i>Leaving school with the examination passes I had did effectively closed the door to the career I was truly interested in. This is what I consider to be the single most important event in my academic life as the ramifications for future took me two decades to begin to overcome. (No 38)</i>

Nowadays the above statements could apply to many people who do not have academic credentials since a degree is now expected for many (even non-graduate) jobs. However, the respondents revealed that they felt they had missed opportunities because of being in some ways prevented by the education system from achieving the potential that they feel their high IQ warrants. They see their high IQ and academic underachievement as a significant cause of their difficulties in adulthood, as shown in the next table.

The below statements are in keeping with the arguments made by Baker (1995), Ruf* (2000), Martin et al. (2010) Guénolé et al. (2013) and Jones (2013) about the negative impact of underachievement on self-esteem and mental health. This issue will be discussed in greater depth in Chapters Seven and Eight.

Poor mental health and, in particular depression linked to high IQ and underachievement are, indeed, one of the important findings of this research.

Feelings of failure leading to depression. (27.6% n= 44)
<i>I have suffered from depression over the years, sometimes very badly and contemplated suicide at times. I'm angry at the people who made me suffer in my formative years and also angry at myself for not being able to get over it and not having made more of myself. Also, the guilt and anger at actually being depressed and not being happy is a depressant in itself. (No 104)</i>
<i>My mental health was reasonable apart from the period of anxiety when I dropped out of university and one brief period of project anxiety in the 1980s, but now I'm chronically depressed. I'm very sad that I've experienced depression since my son was born, so that I don't feel I've been a good enough parent or husband. (No155)</i>
<i>I have had psychiatric referrals for depression and anxiety. I internalised my failures and decided that it was a consequence of my own worthlessness. I dismissed any signs of my ability, such as passing the Mensa test, as flukes. (No 203)</i>
<i>My underachievement has had a dramatic impact on my life. I constantly suffer anguish and frustration. I am overwhelmed by a feeling of loss, waste and guilt. Sometimes I am angry and blame my schooling, teachers and parents. Sometimes, I feel I can't blame myself, because I was the victim of my own upbringing and personality, but at other times I am angry with myself for being so weak and not taking charge of my life. I am always unhappy deep down and have been treated for depression. (No 9)</i>
<i>The conditions generating my underachievement have rendered me as emotionally and personally disabled as if part of my brain had been destroyed or my legs had been amputated at the hips. I cannot think my way out of this box. (No 54)</i>
<i>I have been clinically depressed and have needed lengthy therapy to stop dwelling on my mistakes and failures. (No 71)</i>
<i>For a long time I have suffered from depression: I think that, on the whole, I'm now able to simply accept the whole sorry affair as part of who I am. (No 117)</i>
<i>At school I was held back, which, looking back, was a bad thing, because all that mental energy needs to be directed in some direction. I believe, looking back, that I probably suffered from depression at school because there was no outlet for this mental energy. (No 233)</i>
<i>I am essentially in the process of being reborn, but at 34 I have missed out on so much, and a large part of that is down to my early academic experiences. It has been the underlying cause of sadness and anger in my life, indeed, ruining my life for the best years of it because of suffering from depression. (No 39)</i>

Being unable to use one's abilities or to engage in a variety of intellectually stimulating and challenging tasks was mentioned by Falck (2013) as the one factor

quoted by all the respondents in her study of high IQ adults in the work place. A third of her interviewees described having experienced negative mental health effects when not utilising their abilities, such as experiencing frustration, insecurity and suffering from depression. Nauta and Ronner (2013) observed the same phenomena with the participants of their study. This will be discussed further in Chapters Six and Seven.

I have feelings of frustration at not fitting in or being bored and unfulfilled. (10.1% n = 16)
<i>I feel that I have so much potential and I'm frustrated that I have not been able to use it to its fullest extent. I am sad and angry about it. I find it frustrating and it has affected me mentally. (No 68)</i>
<i>I have lost count of the times when I have felt frustrated when I could see and interpret information in much clearer and concise ways than some so called qualified professionals but was not listened to because of not having 'credentials'. (No 38)</i>
<i>I have often felt that I don't fit in with my peer group and after some years of psychotherapy it is obvious that this is because I am more intelligent and expect people around me to have the same level of intelligence and speed of thinking (and dry sense of humour) as me. (No 71)</i>

Of those 43 (27.3%) out of the total sample of 158 who quoted no impact or some positive impact of academic underachievement, reasons given were as follows:

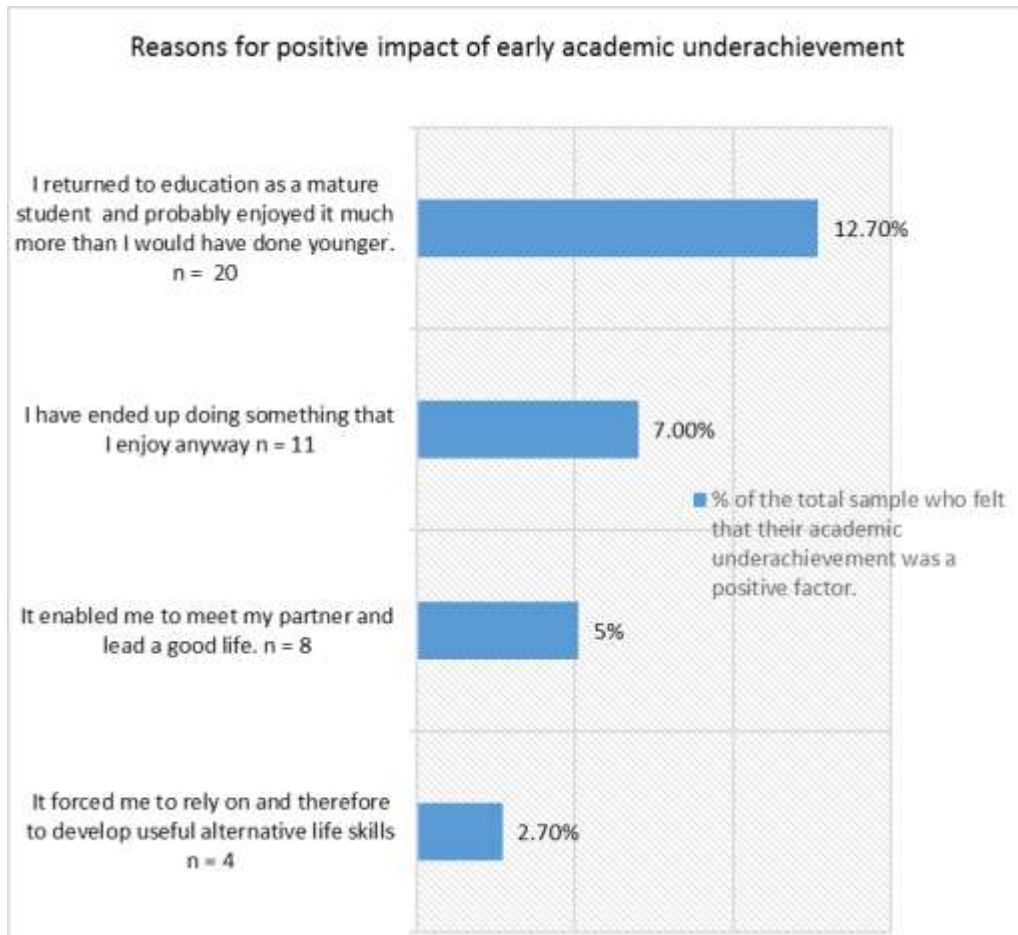


Figure 14: Reasons for positive impact of early academic underachievement

<p>I returned to education as a mature student and probably enjoyed it much more than I would have done when younger. (46.8% of 27.3% i.e. 12.6% of all respondents to the questionnaire n = 20)</p>
<p>I did my A levels and undergraduate degree in my 40s and my PhD in my early 50s. I think I got far more out of university than I would have done if I had entered at a younger age. I would not really change anything! I was extremely happy working at xxx until it closed and I am extremely now happy working at xxxxx. (No 73)</p>
<p><i>Higher education opportunities such as the Open University offered me, as an adult, the chance to participate in modular, interest-based courses which suited my needs much better than school had. I built a portfolio of contemporary learning about things I needed to know more about, there and then. (No 85)</i></p>

<p>I ended up doing something that I enjoy anyway. (24.4% of 27.3% i.e. 7 % of all respondents to the questionnaire n = 11)</p>
<p><i>I was not able to do what I wanted so I entered a different profession (finance/accountancy) and I seem to have been reasonably successful in it – if measured in job titles and income. (No 112)</i></p>
<p><i>I did get to work in travel and visit many countries which might not have happened with higher qualifications. (No 144)</i></p>
<p><i>However, although my career has not been as successful as my IQ suggests it should have been, I have achieved a level of happiness with my life which I might have lost had my career been more successful. (No 40)</i></p>
<p><i>If I had been more academically inclined I may not have done many of the things I have done over the years. (No 31)</i></p>

<p>It enabled me to meet my partner and lead a good life. (20% of 21.5% = 5% of all respondents to the questionnaire n = 8)</p>
<p><i>I would change nothing because I wouldn't have met my wife and wouldn't have my children if I had taken a different path. I now run my own successful business, have a great wife and 2 lovely children and live in a great home. (No 70)</i></p>
<p><i>Then, in all probability, I would have progressed to University. However, had I done that, I almost certainly would not have been where I am today – happily married, living in rural Cornwall and writing. (No 48)</i></p>
<p><i>If I had gone to university I would not have met my husband and had the interesting life I have had travelling and living all over the world. (No 3)</i></p>

<p>It forced me to rely on and therefore develop useful alternative skills. (9.8% of 27.3 % i.e. = 2.7% of all respondents to the questionnaire n = 4)</p>
<p><i>My lack of early academic achievement meant that throughout the 30 years of my administration career I got where I did (middle manager civil service and administration manager of a high class hotel) through hard work and demonstrating that I could do things rather than through waving certificates at employers. This was not necessarily a bad thing upon reflection! (No 96)</i></p>
<p><i>Because of having to leave home at the age of 17 I have a lot of life experience that I would not otherwise have had. This puts me in good standing in regard to life skills. (No 49)</i></p>

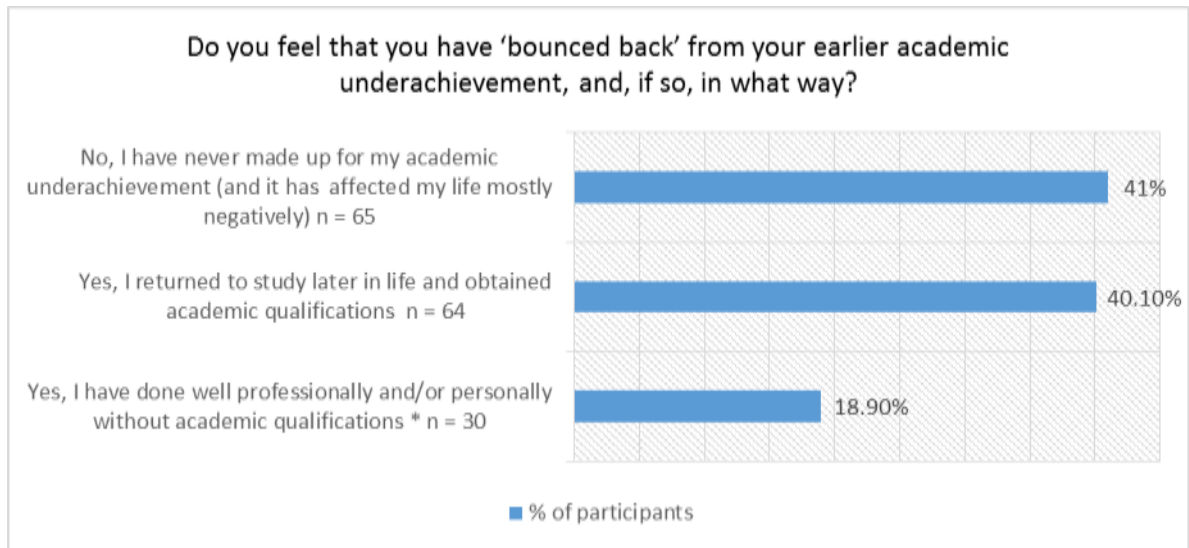


Figure 15: In what ways, if any, have you 'bounced back' from your earlier underachievement?

65 respondents (41%) have not yet reversed (and some do not think they ever will) their academic underachievement, often saying that there would be no point now as it would be too late to influence their professional situation or that they had developed a total aversion for the education system.

The circumstances of the 30 participants (18.9%) who have done well professionally without academic qualifications will not be explored further as this research concentrates on academic attainment. However, it is interesting to note here that amongst the 30, 88% of them (26 respondents) started their working life between 20 and 40 years ago at a time when only a relatively small percentage of 18 year olds went to university and when a degree was therefore not considered an essential

qualification in many professions. Some commented on the fact that the situation is very different for the current 16-25 years old generation.

Out the 50 participants who reported that they had reversed their academic underachievement in adulthood by returning to study as a mature student, 17 (34%) studied either for professional qualifications in accountancy, marketing, management or teaching and 8 (16%) studied for a BA, BSc or Master's degree at a traditional university. The other 25 (50%), obtained their qualifications via the Open University which does not have the same entry requirements as traditional universities and allows for a lot of flexibility in the learning/teaching and assessment methods and patterns. Those 25 (50%) studied for a BA or BSc. Most referred to the Open University as their 'life-saver', the one organisation that had made it possible for them to shine academically despite earlier failures. In addition, many opted to train as teachers in order to improve the system from within. This could be interpreted as resilience and capacity to recover from adverse circumstances (Ruf*, 2000). Helping others may have become a way of coming to terms with their own earlier difficulties.

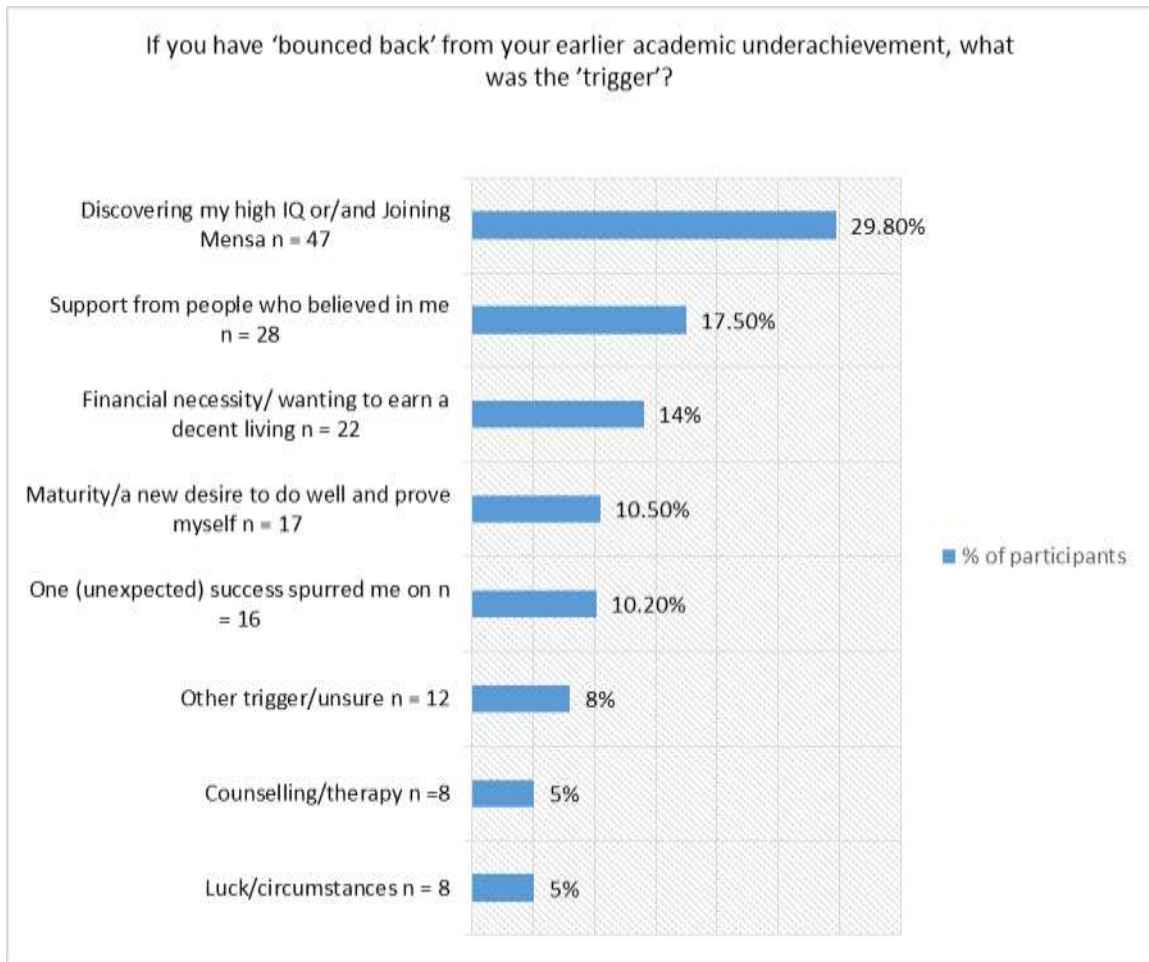


Figure 16: What was the 'trigger' for the reversal of your earlier underachievement?

In all cases, confirmation of their high IQ was a great boost to respondents' self-esteem and for 47 (29.8%) of them what provided the trigger for going back to education in adulthood as it gave them the 'proof' that they were bright and should be capable of obtaining academic qualifications.

44 of them (27.7%) mentioned some form of external encouragement which they had not experienced before. It could seem surprising that only 8 (5%) gained

confidence as a result of counselling or therapy, but this could be explained maybe by the age and gender of the large number of respondents for whom therapy may not be a well-known or accepted form of treatment. Or, as suggested by Webb (2014), the shortage of psychologists qualified to treat high IQ individuals may have been a deterrent in seeking help. All the above was explored in greater depth in Chapters Seven and Eight.

With hindsight and as discussed in the Methodology Chapter, it is acknowledged that the following was a leading question and that it would have been much better to ask: 'What feelings, if any, does your academic underachievement generate?'

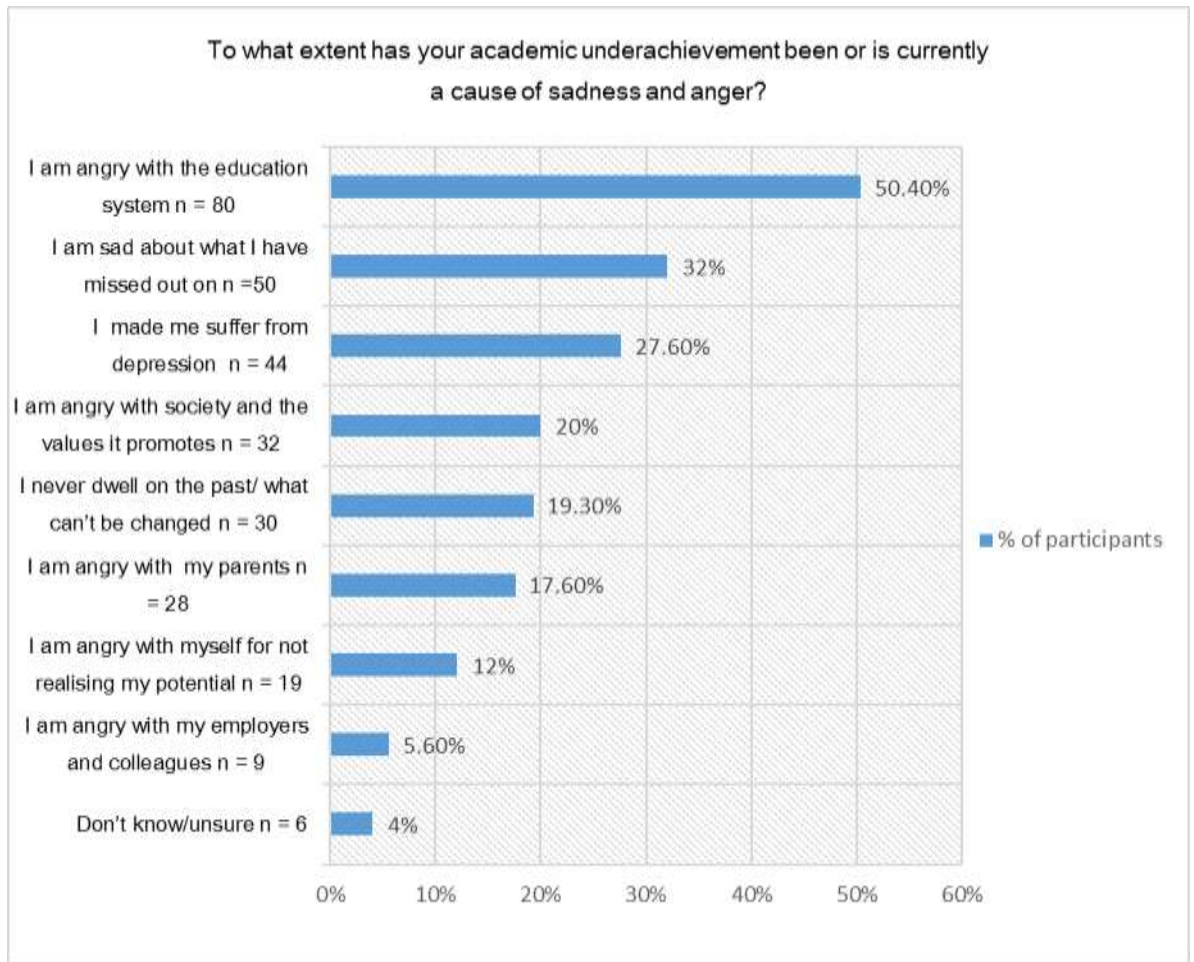


Figure 17: To what extent is your academic underachievement a cause of sadness or anger?

However, since this provided a wide range of responses they are expressed below as follows:

<p>I am angry with education system. (50.4% of respondents n = 80)</p> <p><i>I'm angry with the school for not caring, the teachers for not providing extra things for me to do when I finished before the other children, for the lack of assistance or attention in class, for lack of funding for private school for highly intelligent children. I'm angry with my secondary school for never questioning when I wasn't there despite the amount of time I had off. (No 43)</i></p> <p><i>I feel anger still about the education system, as we like to call it, since it failed to accommodate me. (No 20)</i></p> <p><i>I feel angry that the education system helps the thick pupils but not the very bright ones. I was left to get on with it with disastrous results. (No 158)</i></p>
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<i>I am angry with the cavalier attitude of the school that encouraged underachievers to leave rather than help them because they did not want to dent their exam results statistics. (No 126)</i>
<i>I am still angry about the attitude taken by the xxxxxx University hierarchy, for appointing him as a tutor, not taking any action when it was obvious that a student's situation was bad and getting worse, and afterwards refusing to accept any responsibility for the outcome. This experience has made me very mistrustful of people in authority. (No 57)</i>
<i>I am angry with the teachers at primary school. (No 39)</i>
<i>I am angry with my teachers for not pushing me. (No 126)</i>
<i>I have no anger but a lot of sadness that other people did not recognize my intelligence at an earlier stage in my life and help me nurture it. (No 10)</i>
<i>I am angry with the one inexperienced teacher who, for futile reasons, stopped me from going to art college. By doing this she delayed my professional achievements by about 10 years.(No 41)</i>
<i>I was angry when my grammar school became a comprehensive school as it completely changed the ethos of the school. (No 73)</i>
<i>When I needed an academic reference to go to university and had no choice but to write to my old school, the Head of the 6th Form (whom I had never met) gave me a terrible reference. So bad that I decided it better to not send a reference at all. I am still angry that someone could be so casual and possibly closing doors for me. (No 49)</i>
<i>I feel angry at teachers' dismissive criticisms that should have come with offers of remediation. (No 133)</i>

I am sad about what I missed out on. (32% of respondents n = 50)
<i>I wish I had experienced university at the normal age like my friends as I could not really engage in uni life as a part-time mature student. I want to make sure my daughter does. (No 111)</i>
<i>When I was 19 and all my friends were having a great time at uni, partying and travelling, I was working in a mind-numbing job and feeling very depressed. By the time I went to university I was beyond that stage in my life. I never really did the uni things. (No 88)</i>
<i>I can never make up for what I missed as a late teenager/in my early twenties. Some things are meant to be enjoyed at a particular age and time in life. (No 67)</i>
<i>When I hear about what students get up to I am a little jealous that I never had that opportunity. (No 114)</i>

I am angry with society and the values it promotes. (20% of respondents n = 32)
<i>I am angry/sad that people do not know the difference between intelligence, knowledge and qualifications as this distorts their appreciation of a person's abilities. (No 10)</i>

I have worked for companies like MasterCard, Mercedes Benz, VW, Bosch, Philips, Lufthansa, Motorola and Nokia all of whom are engaged in what I believe to be pointless activities. To spend most of my life engaged in pointless endeavours as a result of what society values was probably more of a factor in my frustration than the academic failing. (No 27)

I am angry with British society which undervalues engineering compared to western European countries such as Germany and France. I'm angry and sad that British government and society value service industries, particularly financial services, above manufacturing and other primary-economic activities. I'm angry and sad that British government defense and foreign policy squanders resources on supporting the US alliance, while other European countries enjoy a higher standard of public amenities. I am angry that I don't seem to be able to do anything to influence government policy. (No 155)

I am angry at having had all the disadvantages that working class families typically have with regards to life chances. (No 39)

I am angry with the class system of the time which failed to help poor kids like me. (No 112)

44 (27.6%) respondents said that they had suffered from depression as a direct result of their academic underachievement. This reflects the results already expressed in figure 13 and all the quotations relating to these can be found on page 166.

I never dwell on the past/what can't be changed. (19.3% of respondents n= 30)

I take life as it comes. I've never had a grand plan and carry no chips. (No 93)

I have been disappointed in myself, but have not felt anger or sadness to be appropriate. After all, there are always opportunities to rectify belatedly past underachievement. I think I have largely done this now. (No 25)

In life, we can only be certain about what actually happened. Endless 'if only' speculation is a waste of energy and tends to induce negative attitudes which are further destructive. (No 20)

One should look to the future. That is what will happen. The past has gone and cannot be changed. (No 222)

The past is gone and cannot be altered and imagined alterations would probably not be relevant in today's world. If things had been different there is no way of telling if the outcome would have been better or worse. (No 51)

I don't believe in retrospective "if only's" as they are pointless. Who knows what direction a life would take if a different path was chosen. I may have obtained a first in Computer Science, moved up the career ladder and become head of IT for a major US bank in Tower 1 and suffered the same fate as thousands of others on 9/11. (No 105)

I am angry with my parents. (17.6% of respondents n = 28)
<i>I feel some anger towards my parents for not taking my ambitions seriously and being limited in their outlook, though I can understand, given their backgrounds, why they took those views. (No 20)</i>
<i>My father's attitude was damaging. He was domineering and demanded I should perform well, and was also excessively critical of my shortcomings (real or imaginary). I received scant encouragement or praise for achievement. (No 57)</i>
<i>I am angry with my parents who, being working class, had no access to any real insight into giving children educational encouragement (No 39)</i>
<i>I am angry with my parents for not pushing me harder. (No 126)</i>
<i>I have been angry/sad at various times mainly with my step-father for not supporting my education. (No 112)</i>
<i>Anger that my parents restricted my life so radically. Anger that I grew up hearing often of the injustice that my father was prevented from attending grammar school on a scholarship as his father would not get him a bicycle to travel the 5 mile journey each way, only to find out that effectively the same had been done to me. (No 58)</i>

I am angry with myself and/or sad for not realising my potential. (12% of respondents n= 19)
<i>Occasionally I'm saddened by not having used my considerable mental activity to greater positive effect in the world. (No 120)</i>
<i>I am sad because I think it has impacted on my self-esteem and self-confidence and as a result I have not achieved my potential. (No 72)</i>
<i>I am angry with myself for not working harder. (No 126)</i>
<i>There is a definite feeling that there was something that I was put here to achieve and I have not completed that task. I am sad about this. (No 66)</i>
<i>I am sad that my life has been such a waste. (No 78)</i>

I am angry with my employers/colleagues. (5.6% of respondents n= 9)
<i>I am angry for all the times when someone else's opinion was taken instead of mine because they were better qualified on paper but not as competent. (No 137)</i>
<i>I have lost count of the times when at work I could see and interpret information in much clearer and concise ways than some so called qualified professionals. (No 38)</i>
<i>After I passed my probation I was put in a job that denied me the chance to use my mind appropriately and this ruined my mental health. The managers recognised that my work was not giving me the chance to make an impact, but nothing could be done to give me a fair chance to show what I could do. (No 185)</i>

4.3 Significance of results

This chapter dealt with the analysis of the first questionnaire which was completed by 158 members of British Mensa as a result of an appeal made in the August 2009 British Mensa magazine.

Many of the findings match that which were described in the Literature Review Chapter about the causes and consequences of academic underachievement in high IQ children, but not all. Other findings highlight phenomena relating to the long-term effects of early academic underachievement which are not explored in the literature on high IQ individuals, as follows:

4.3.1 Results that match the literature on gifted children

Firstly, the respondents making a link between underachievement and non-identification of high IQ seems to corroborate what the literature revealed. For example, Richert et al. (1982) posit that a large number of high IQ individuals remain unidentified, in particular underachievers who, as a result are not included in support programmes. In addition, Van Tassel-Baska (2000), Heller (2004) and Stoeger (2006) claim that early identification of high IQ is crucial for the provision of special educational needs. This is especially so since, as Hargrove (2010) suggests, a gifted child can easily be overlooked by teachers if their performance is average or mediocre. Lovecky (2004) and Freeman (2012) also point out that identification of

high IQ children is often left to chance. Yet, it is crucial at an early age because, being different from the norm, their needs demand attention as soon as they start formal education.

Secondly, the comments made by the participants, as well as confirming the literature on underachievement, highlighted the characteristics often common to high IQ individuals such as advanced reading and math skills, advanced vocabulary and quick mastery of abstract concepts (Plucker, 2001; Heller, 2004; Siaud-Facchin*, 2008 and Terrassier* and Gouillou*, 2008).

Thirdly, responses to the questionnaire show that perceptions of underachievement were subjective and relative. When academic achievements fell below the participants' own expectations, their perception was one of academic underachievement – even if attainment had been quite high compared with the population average. This correlated with the questions raised by Whitmore (1980) and Delisle (1994) regarding the subjective nature of the label of underachievement and what Falck (2013) refers to as 'the inner experience of falling short of potential'. The latter seemed to be felt very acutely by high IQ individuals, perhaps because of their ability to think abstractly and in-depth about a wide range of issues.

In addition, the reasons given by the respondents for their perceived causes of academic underachievement appeared overwhelmingly to be related to the school

environment. These results confirmed the claims made by Hollingworth (1937), Ralph et al. (1966), Colangelo et al. (1993), Berger* and Francequin** (2005), Rimm* (2008), Siaud-Facchin* (2008) and Hargrove (2010). They posit that, although personality traits and parental support have an impact on educational performance, the educational environment - such as teaching quality and school ethos - plays a more important role in determining educational attainment for high IQ children. Acknowledging, understanding and catering for their learning differences through acceleration (the speeding up of instruction as gifted children are fast learners who require little repetition) and enrichment (increased depth of study of topics which extends the regular curriculum) are seen to be the most important influences on their academic achievement and, when missing, the causes of underachievement. As shown in a comment relating to Figure 12, when a teacher caters for a child's advanced skills by providing differentiated, harder work the child can remain 'challenged and interested' as suggested by Rimm* (1989); Gross (2004); Freeman (2005); Stoeger (2008) and Geake* (2009).

Indeed, Ziegler et al. (2012) concluded that methods for preventing underachievement in gifted students were often insufficient. This confirmed what Richert et al. (1982) said thirty years previously: high IQ children underachieve when their learning and developmental needs are not being met.

Finally, so much has been known for such a long time about the causes of and cures for underachievement in gifted children that one can only be puzzled that this phenomenon is still so prevalent today. What are the barriers, if any, that make it difficult to identify high IQ children and cater for their special educational needs? This question formed the basis for further discussions in Chapters Seven and Eight, as were the long-term effects of the academic underachievement in gifted individuals, hitherto unexplored in the literature.

4.3.2 Items highlighted in the literature but not mentioned by many respondents

Despite the discrepancy between their IQ score and low academic attainment, none of the respondents questioned the validity of IQ tests and scores. They see their passing the Mensa test as the proof that they are intelligent. This belief is so strong that the discovery of their high IQ is mentioned as a 'watershed' by many of them, the one thing that helped them gain self-esteem and the motivation to 'turn their life around'.

Furthermore, personality traits, which are often quoted by teachers as the reason why gifted children may underachieve were not perceived by the respondents as an important cause of their underachievement, although many blame it on their laziness.

4.3.3 Issues mentioned by respondents but not highlighted in the literature

Firstly, the literature about high IQ individuals usually refers to adults who were identified as gifted when they were children (Terman, 1947; Freeman, 1991; Streznewski*, 1999; Jacobsen*, 1999; Bost*, 2011; Freeman, 2010; Falck, 2013; Nauta and Ronner, 2013). By contrast, this survey concerns itself with those who were identified late in life as having a high IQ. They were therefore not classified as gifted when children and represent a sample of individuals whose trajectory in life is rarely discussed in the literature. As such, their responses provide data that is yet unexplored and therefore an original contribution to new knowledge.

Secondly, despite having an IQ in the 98th percentile, 55 respondents (35%) left the education system at 16 with no or poor qualifications. They seemed, therefore to have coped poorly with the demands and requirements of the school curriculum, or at least the way it was assessed. Although this related to this sample only and may not give a true picture of the level of underachievement amongst the total gifted population, the figures were striking enough to be worthy of note.

Indeed, what the responses to the questionnaire also revealed is that, for this sample, there was a very large discrepancy between the assumptions generally made about the link between academic potential (as assessed by IQ tests) and academic attainment (as assessed by academic qualifications) – much larger than that mentioned in the literature. Maybe, it was because the latter, being mostly

limited to the experiences of school children or adolescents, did not consider the overall and longer term manifestations of academic underachievement and the large gap between potential and attainment which this study uncovered.

In addition, in the same way as not having any tangible proof that they were intelligent had been a stigma for them, discovering fairly late in life that they had a high IQ – although it was a great confidence booster in many ways – became another stigma in some cases. Some referred to this phenomenon as finding it hard to ‘come out of the closet’ as if there was something shameful in admitting that one had a high IQ, especially if they were seen as not have done anything ‘tangible’ with it. Participants commented that high intelligence is often linked with high achievement in people’s minds and found it difficult to explain the discrepancy between the two, especially to employers who seem to equate lack of academic credentials with low intelligence or aptitudes. This was a source of anger, sadness and frustration.

Finally, the vast majority of respondents felt that their academic underachievement had had very negative consequences on their adult life, even when they had gone back to studying as mature students: lack of qualifications affected their job prospects and earnings and led to frustration and unhappiness, feelings of not fitting in and, in a significant number of cases, mental health problems, especially

depression (43 participants or 27.6% of the total sample). This seems worthy of further research.

4.3.4 Rationale for further research and collection of data

The results from the first questionnaire revealed that 30 participants (18.9%) had been successful professionally and/or had a good life despite their academic underachievement. However, 25 of them commented that they had all started their working life 30 to 40 years ago at a time when academic qualifications were not a requirement for many jobs. They acknowledged that the reality was very different for young people today and that low academic attainment was a greater source of difficulty now than it was then. Their interest in this research was based on a desire to make changes that would affect positively the future of their children, grandchildren and beyond.

In addition, 65 participants (41%) said that they had not yet recovered from their earlier academic underachievement and regretted that they probably never would. They felt that it would be too late to influence their professional situation or they stated that they had developed a total aversion for the education system. Their experiences should be investigated further as the – mostly negative – impact of their academic underachievement on their whole lives needs to be more widely known. Indeed, it would seem that the academic underachievement of high IQ individuals can have disastrous effects on the individuals concerned but also on society, for

example in economic terms (cost of helping them cope with poverty and poor mental health).

However, 64 (40.1%) respondents revealed that they had reversed their earlier academic underachievement by obtaining graduate and post-graduate qualifications in adulthood. The conclusion drawn from these first findings was, therefore, that it would be useful and important to discover the lessons, if any, that could be learnt from the experiences of their later attempts at obtaining formal academic qualifications. Indeed, it was felt that the differences between their two experiences of education as a child and as an adult may provide clues as to how their predicament might have been avoided and future similar situations prevented.

4.4 Conclusion

After having analysed the first questionnaire it was decided to concentrate on the respondents whose academic achievement was, in effect, delayed rather than examine in greater depth the experiences of the individuals who had not reversed their academic underachievement. It was felt that finding out what had been different for those late achievers between their first and second time attempt at obtaining academic qualifications may give further clues as to what they perceived the reasons for their early underachievement and subsequent reversal to be.

Chapter Five provides first of all a comparison of the reasons highlighted by participants about their perceived reasons for underachievement depending on whether or not they had reversed their underachievement in adulthood. It then provides an analysis of the results obtained from the second questionnaire completed by 50 of the late academic achievers and sheds some light on the phenomenon of delayed academic achievement in high IQ adults and its long-term effects.

CHAPTER 5

Second Questionnaire

Experiences of Delayed Academic Achievement

5 SECOND QUESTIONNAIRE - EXPERIENCES OF DELAYED ACADEMIC ACHIEVEMENT

5.1 Introduction

The analysis of the first questionnaire revealed that a substantial number of the individuals who classified themselves as underachievers (64 i.e. 40.1% of the total) were in fact *late achievers*, that is to say individuals who had underperformed at school but who had obtained first degrees, post graduate degrees, including PhDs, in their late twenties, thirties, forties and fifties. The individuals concerned are described as having reversed their underachievement and the term used to describe this phenomenon in this dissertation is either late or delayed academic achievement, both terms carrying the same meaning.

Amongst these late achievers, 50 (78% of the sub-sample of 64) agreed to participate in a further survey and completed a second questionnaire (see appendix 4).

The aim of this second questionnaire was to elicit from respondents what they perceived were the factors that had had been instrumental in their deferred academic success and the impact that the latter had had on their life trajectory. It

also attempted to elucidate the differences between the time when they had underachieved and the time when they had obtained their academic qualifications.

This seemed worth further examination as there is very little in the literature about delayed academic achievement in high IQ individuals. Indeed, the literature discussing the problems that high IQ individuals may encounter as adults usually assumes that these individuals were high achievers as children and, in any case, mostly concentrates on problems they experience in the work place (Geake*, 2009; Jacobsen* 1999; Nauta and Ronner, 2013; Falck, 2013).

However, before analysing the results of the second questionnaire, a comparison was made between the 65 respondents who had never reversed their academic underachievement and the 64 who had.

5.2 Comparison between sub samples of non-achievers and late achievers

The figures below show the reasons quoted by the participants in each of the two subsets as well as their relative percentage. The number of participants is shown after the statement and the percentage expressed in the bar chart.

The results helped draw a comparison between all underachievers and late achievers in terms of their perceived reasons for early underachievement.

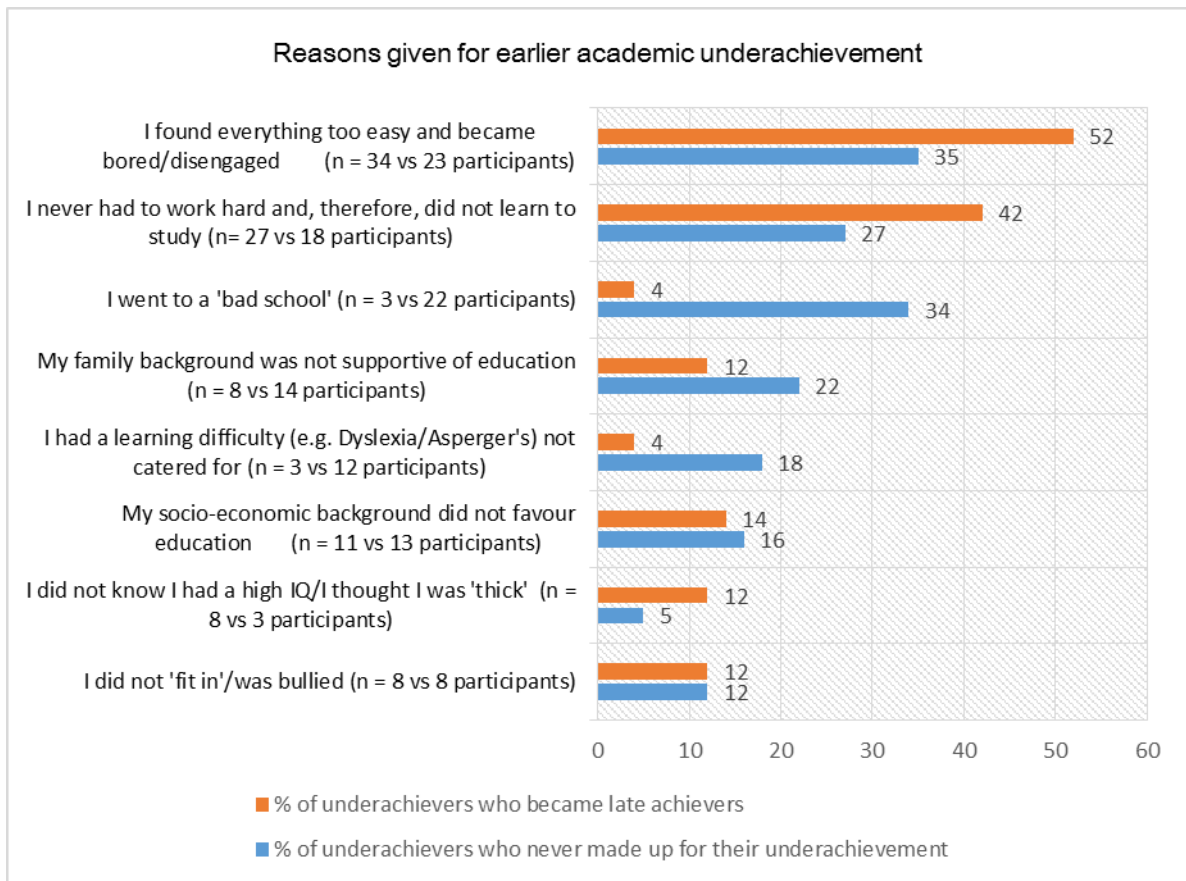


Figure 18: Perceived reasons for early academic achievement

Some respondents gave more than one answer which is why the total was not 100%.

The results showed similarities and differences between the two groups as follows:

Similarities between the two groups (underachievers vs. late achievers)

Firstly, the numbers of participants who attributed their academic underachievement to bullying and/or an unfavourable socio-economic background were very similar in

both groups of 'underachievers' and 'late achievers' (8 participants in each case - 12%).

Respondents mentioned that bullying occurred because they were different and disliked for being 'too clever'. This had taught them that being clever was a bad thing that should be hidden as much as possible – a common occurrence described by Lovecky (1992); Siaud-Facchin* (2008) and Jones (2013). As suggested by Adda* and Catrou* (2003) and Falck (2013), the difficulties encountered by gifted individuals often result from the hostility they experience from peers and teachers (and later, employers) who feel ambivalent about their abilities.

Those who said that their socio-economic background was a hindrance to their education (11 vs 13 participants – 14% vs 16%) all described it as 'uneducated' and/or 'working-class'. This confirms research carried out by Resnick (2008) and the Russell International Intelligence Group (2013) and highlights that this issue has been prevalent and acknowledged for at least the last 50 years with seemingly little change.

Differences between the two groups (underachievers vs. late achievers)

By contrast some differences appeared as follows:

Firstly, there were more individuals who had a disability or learning difficulty (12 vs 3 participants – 18% vs 4%) or whose family background was unsupportive of education (14 vs 8 participant's 22% vs 12%) amongst those who had never reversed their underachievement than amongst the late achievers.

Having a family background unsupportive of education when one is a child and/or suffering from an undiagnosed learning difficulty (such as, for example, dyslexia) seems, in this case, to have made a fairly substantial difference. According to Willard-Holt (1994), Lovecky (2004) and Webb et al. (2005), dual exceptionality is one of the diagnoses most likely to be missed by teachers and to have a serious negative impact on the child's attainment. These unfavourable circumstances may have made it much harder, even impossible, for these individuals to reverse their underachievement in later life. Conversely, a supportive family background and the absence of or a diagnosed learning difficulty, that is catered for may have laid the foundations that made reversal of underachievement easier in later years.

Secondly, 3 of the late achievers (4%) gave as the reason for their original underachievement 'bad schools' or 'bad teachers' as against 22 (34%) of the non-achievers. One could deduce that those who experienced delayed academic achievement did go to 'good schools' with 'good teachers' which put them at an advantage when going back to education in later life. It could also mean that they take greater responsibility for and ownership of their earlier underachievement.

Indeed, they may have a greater awareness of their part as an individual, or other circumstances in their poor school performance (Batchold, 1969; Carr et al., 1991 and Dweck et al., 2004) as a result of having experienced academic achievement later in life.

Thirdly, 12% of late achievers (8 participants) quoted as a reason for their underachievement being unaware of their high IQ as a child or young adult and believing that they were 'thick' against 5% of underachievers (3 participants). Yet, other answers to the second questionnaire revealed that for 42% of respondents the late discovery of their high IQ was the trigger for going back to education in adulthood. As Heller (2004) and Persson (2009a) suggest, not knowing as a child that they had a high IQ and academic potential and - in some cases, even believing that they were stupid because of not performing well academically - may have made individuals blame themselves, rather than external factors such as their educational environment, for their poor academic performance.

In addition, 34 participants (52%) amongst the late achievers said that they were bored and disengaged because they found everything too easy as against 23 (35%) amongst the underachievers. Frustration and boredom are indeed seen by researchers as one of the main reasons for underachievement in high IQ children (Colangelo et al., 2004; Gross, 2004; Siaud-Facchin*, 2008; Hargrove, 2010). However, one can suppose that, if being able to process material more quickly than

their peers was a problem at school, this may have been an advantage when studying at university level.

Finally, there were 42% (27 participants) amongst the late achievers as opposed to 27% (18 participants) non-achievers amongst those who said that they never had to work hard and, therefore, they had not learnt to study. Again, it is possibly because they had greater awareness of their weaknesses that they were able to devise new learning strategies when they successfully went back to education as an adult. As proposed by Colangelo et al., (1993), Dweck et al., (2004) and Duckworth and Seligman (2005), it could be that identifying as an internal rather than an external factor the reasons and causes of their earlier underachievement in the school system may have helped effect their reversal.

5.3 Results from the second questionnaire

5.3.1 Introductory remarks

The second questionnaire highlighted the circumstances surrounding the reversal of underachievement and the barriers to delayed academic achievement for the late achievers and described the impact of delayed academic achievement on their adult life.

Figures 18 and 19 were derived from general data provided in the questionnaire about age and gender. The sample, was made up of 21 females (42%) and 29 males (58%) and was representative of the overall British Mensa membership in terms gender.

There was no significant difference between males and females in terms of the ages of the respondents.

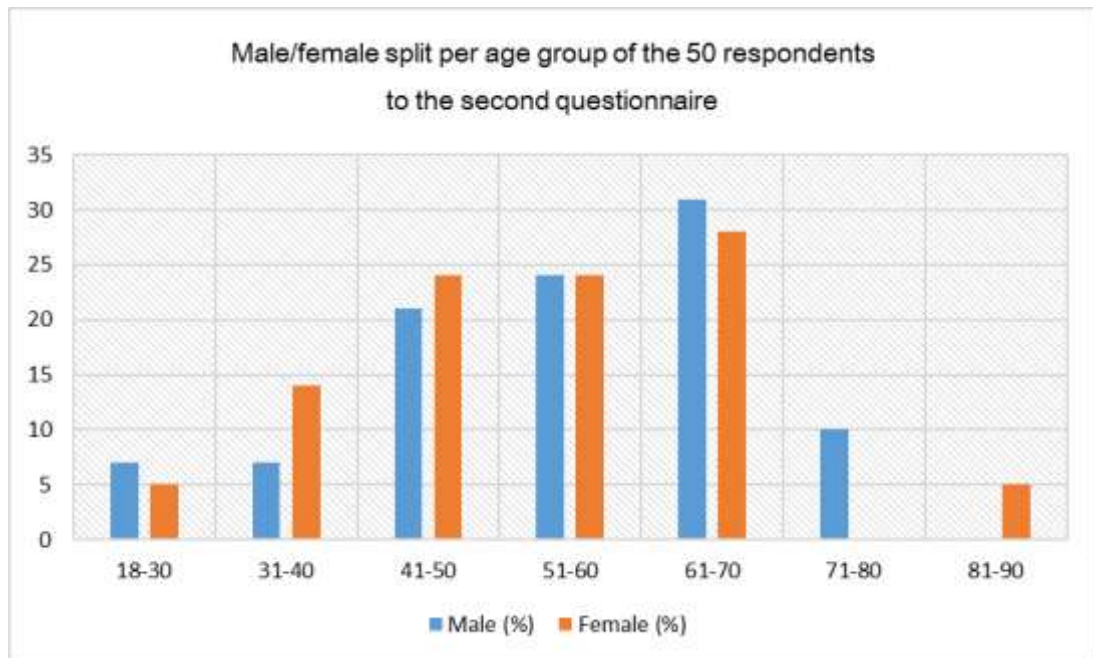


Figure 19: Male/female split per age group of the 50 respondents to the second questionnaire

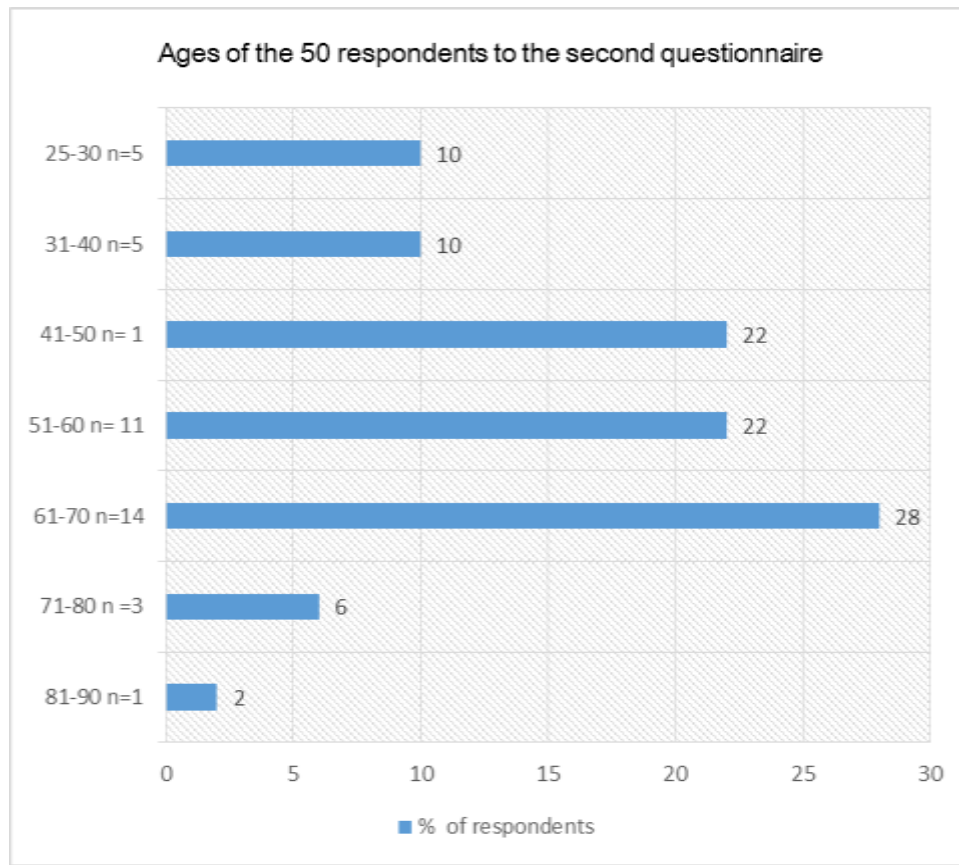


Figure 20: Age of the 50 respondents to the second questionnaire

As was mentioned in Chapter Four, the participants in the study had to be mature since one of the aims of the research was to discover the long-term effects of academic underachievement or delayed achievement. The fact that 29 (58%) respondents were over the age of fifty may have been an indication that, the older they were, the more conscious they were of the long-term effects of their delayed achievement. Alternatively, it could simply mean that they were at a stage in their life when they had more time to answer lengthy questionnaires or address these issues.

Although the respondents' formal education took place a long time ago, what they experienced resembles fairly closely today's pupils' experience. This was illustrated by the June 2013 Ofsted report as well as articles such as the ones published in the *Mensa* magazines (Murray* et al., 2013 - see appendix 13) and Kendal* et al., (2014) on the problems gifted children currently encounter in the education system. This would appear to reflect that, despite all the research having been carried out over the last decades about the underachievement of gifted children, there still seems to be well-documented barriers in schools when it comes to catering for the special educational needs of high IQ children.

Details of the highest qualifications obtained by the participants and the age at which they were achieved can be found in appendix 9.

It must be acknowledged here that, because of the fairly small sample of 50 participants, some of the answers were given by too few to be statistically significant. However, they still give an insight of the relative importance they attributed to various factors and, for this reason, they are included here.

Below are the themes that emerged from the responses to questions four to ten, with quotations extracted from the questionnaires to illustrate the points made. Some respondents gave more than one answer for some questions, which is why the total is not always 100%.

The number in brackets at the end of the quotations reflects the order in which the participants responded to the article inviting them to participate, rather than when they returned the questionnaire (some replied early to the article to volunteer to participate in the study but may have completed the questionnaire at a later date). In addition, the terms 'respondent' and 'participant' are used interchangeably throughout.

5.3.2 Circumstances that gave the motivation to study

Out of the 50 respondents, 38 (76%) had started to reverse their academic underachievement by the time they were in their late thirties, 25 (50%) of whom by their late twenties. It would seem that the 20-35 years age range was a crucial time for the late achievers to start realising their potential.

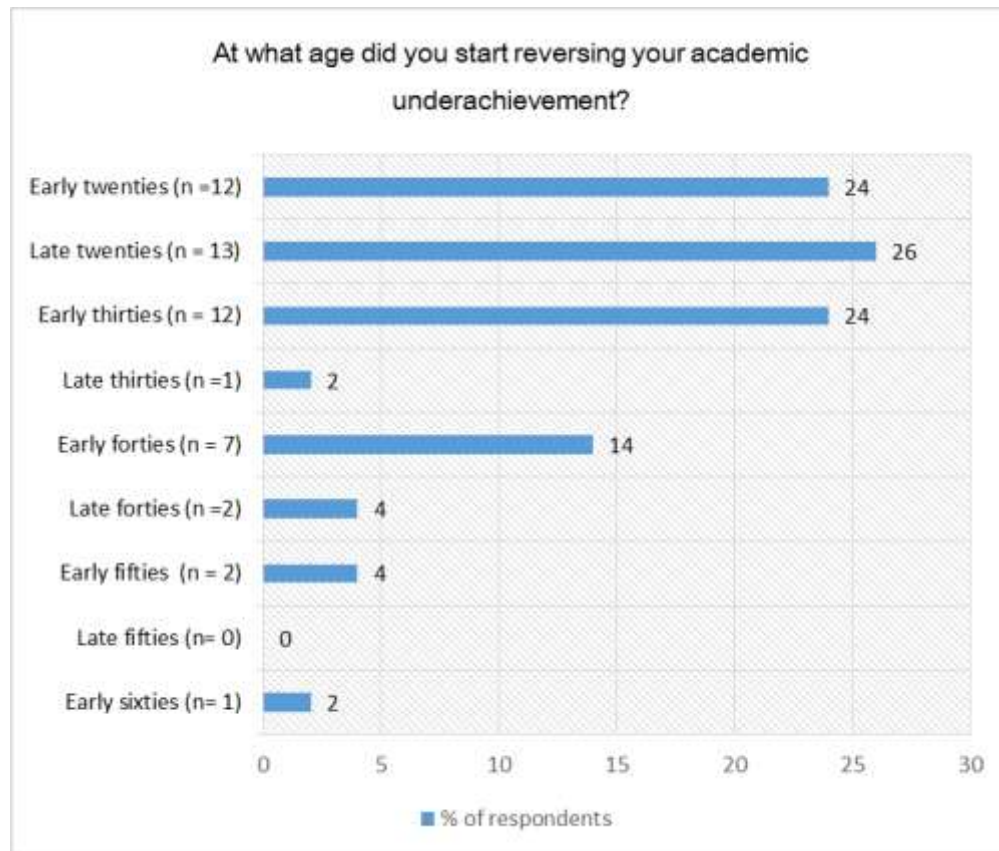


Figure 21: Age at which respondents started to reverse their academic underachievement

It is worth noting here that the very same individuals who were very much ahead of their peers in terms of reading, speaking, story-telling, arithmetic, science etc. when they were children (the 'enfant précoce' term used in French for the gifted child describes this earlier-than-the norm development) 'lose' ten to twenty years of their lives due to academic underachievement, as discussed in Chapters Six and Seven.

What the participants in the survey said matched the literature which suggested that by the age of 13 or 14, most unidentified high IQ children have dropped out of the education system, mentally at least (Shaw and McCuen, 1960). As Kay et al., (2007)

posit, if not caught early, underachievement becomes more pronounced and increasingly difficult to treat with each passing year. Colangelo et al. (1993) and Baum et al. (1995) also claim that reversing underachievement can take many years as individuals need to unlearn their learned helplessness.

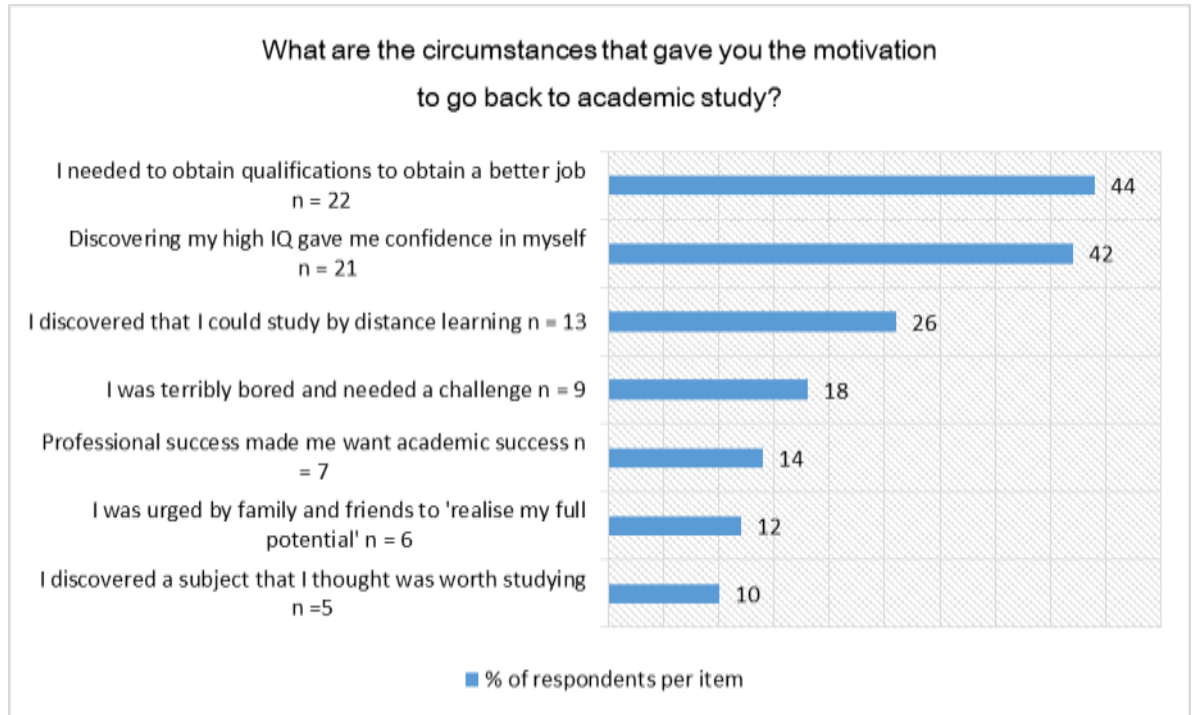


Figure 22 : Circumstances giving the motivation to go back to academic study

I needed to obtain qualifications to obtain a better job. (44% n = 22)
<i>"Realisation that I would never be able to fulfil my potential without relevant academic qualifications. This led to frustration in the workplace as I could see less intelligent people in positions of greater responsibility than me." (No 38)</i>
<i>"Clearly it was a contact with "reality". I thought I would handle things easily after my secondary school was over, but the opposite happened. I had many problems and was unable to solve them. Also I realised that I was not going to have a good life working in unskilled jobs." (No 187)</i>
<i>"I didn't want to spend my life working as a postman/driver/labourer waiting to retire at 65 with a pension. I worked alongside people with this attitude. I thought then and I still do: what a waste of a life!" (No 223)</i>

"I studied something with relevance to my everyday work as a means to get a pay rise from a pitiful starting salary." (No 47)

"I cannot say that I was motivated to reverse my academic underachievement, it was more of a case that my employer had offered me the choice to take an MSc as a means of career advancement." (No 52)

The reasons for starting to reverse their academic underachievement were varied.

The one quoted the most (22 respondents i.e. 44%), as illustrated above, was an economic reason – the need to get a (better) job and more money. This could explain the answers to Question Three which showed that the 20-35 years age-group was the most active in trying to reverse their underachievement.

This was in some ways confirmed by the data in Figure 22 which gives as the main motivator for going back to education the need for qualifications in order to get a job. Data in Figure 30 also point to the fact that reversal of academic underachievement needs to take place as early as possible to have a positive effect on career and earnings.

The other reason was a psychological one: the sudden realisation that they had a high IQ gave them the confidence to embark on academic study, pointing once again at the possible importance and usefulness of early identification of high IQ and academic potential (VanTassell-Baska, 2000; Heller 2004; Stoeger, 2006).

Discovering my high IQ gave me confidence in myself. (42% n = 21)
<i>"Following a motorcycle accident, tests in a mental clinic (due to suspected brain damage) showed that I had a high IQ. My self-perception completely changed." (No 36)</i>
<i>"Joining Mensa at age 30 made me realise that I must have the ability to do a degree." (No 142)</i>
<i>"Family and friends were always joking (I thought) about me, saying such things as "Well you're the clever one ..." etc. So I asked a particularly close friend about it and he said they meant it. I felt I had to prove something to myself. From this point I took the Mensa test and subsequently the degrees." (No 42)</i>
<i>"Discovering my IQ was a big turning point for me. Discovering I was in the top 2% of the population made me ask myself what the top 2% jobs were, why I wasn't doing one of them and what I needed to do to change this." (No 49)</i>
<i>"Becoming a member of Mensa greatly boosted my self-confidence. All of a sudden I felt I could achieve anything." (No 154)</i>
<i>"Passing the Mensa test provided me with validation of my intelligence and gave me confidence to embark on studying." (No 164)</i>
<i>"I realised that I had a high IQ when I became a member. The main benefit was an awareness that I could (and should) have done better. This gave me the confidence to start studying, and the determination to succeed." (No 214)</i>

The third reason was a practical one - the discovery that it was possible to study without standard entry qualifications and/or by distance learning. Although this was only partly acknowledged in Figures 23 and 24, 25 of those participants who studied for a BA or BSc (as opposed to professional qualifications such as in accountancy or teaching) i.e. 50% of all late achievers who returned the questionnaire studied via the Open University.

I discovered that I could study by distance learning. (26% n = 13)
<i>"Distance learning is the most obvious example of a system I benefited from and which helped me reverse my academic underachievement. The OU has been in existence since the 1970s with, significantly in my context, no qualification requirements for undergraduates. It appears to me that the number of higher education institutions offering distance learning is growing, with facilities such as computer conferencing and course websites often now available. This is good news for people like me." (No 25)</i>

<i>"On leaving the military the availability of distance learning programs (i.e. Open University) and my ability to pay for them became the greater factors." (No 38)</i>
<i>"I discovered that I could study to degree level with the OU even if I hadn't passed English at O Level. However, it did require a lot of self-discipline since it was remote learning." (No 42)</i>
<i>"I came to see the Open University as an opportunity to make some sort of progress." (No 57)</i>
<i>"My desire to learn more about the sciences was very strong and the OU had a very flexible and interesting program of study which fitted the bill perfectly." (No 62)</i>

As high IQ individuals tend to be fast and independent learners who do not like to be slowed down by others and who, as working adults, may not be able to attend traditional university courses, distance learning was quoted as being an ideal vehicle for a quarter of them. This is discussed further in the findings from the interviews in Chapter Six as well as in Chapter Eight and suggestions made as to whether a similar distance learning system could be implemented at the lower levels of the education system.

Furthermore, just as participants reported being bored in their education setting, 18% of the respondents to the second questionnaires also mentioned being bored in their jobs as the reason for wanting to acquire higher academic qualifications.

I was bored and needed a challenge. (18% n = 9)
<i>"Whenever I started a new job I quickly learned all about it, then became bored. I realised that I was capable of more, that I needed to use my brain in a more challenging way, hence the decision to study for higher qualifications." (No 139)</i>
<i>"I was simply disillusioned with industry as I had worked in both manufacturing and services, and I had found nothing intellectually engaging in either. Returning to education was the challenge that I needed to escape the boredom." (No. 20)</i>

"I signed up with the OU because I needed some sort of achievement, some sort of external validation which was missing because of not having a career." (No 225)

"I had noticed that I bored very quickly at work, and also that my work colleagues seemed much slower than I thought they should be when learning new skills. I thought that studying for a degree would provide the mental stimulation I needed." (No 49)

Research carried out by Nauta and Ronner (2013) and Falck (2013) shows that high IQ adults attach the utmost importance to utilising their abilities in the work place by regularly engaging with and applying themselves to a variety of intellectually stimulating and challenging tasks and this is reflected in some ways in the above quotations.

Other reasons given by a smaller number of participants for returning to education were as follows:

Firstly, for 7 participants (14%), being successful in the work place was a boost to their self-esteem and gave rise to the belief that they could be successful at studying too.

Professional success made me want academic success. (14% n = 7)

"By then I had learned to work hard in the workplace and I approached college work in the same spirit - highly motivated, and prepared to do whatever it took to succeed." (No 2)

"I suppose that having worked for a year and been successful gave me some confidence that I might cope with studying this time around." (No 46)

Having a very successful career and seeing that colleagues who were graduates seemed less intelligent than me made me decide to 'show them' (and probably myself!) that I could have letters after my name too. I ended up achieving better than all of them despite having to work full-time whilst studying! (No 215)

Secondly, for 6 participants (12%) external encouragement from family and friends was instrumental in persuading them that they could achieve more than they thought they could.

I was urged by friends and family to 'realise my true potential'. (12% n = 6)
<i>"My husband said that I was bored with the jobs I was doing because they weren't challenging enough. He gave me 100% support in studying without placing any expectations on me." (No. 217)</i>
<i>"Some work colleagues encouraged me to get qualified. They showed confidence in me at a time when I had little in myself." (No 202)</i>
<i>"Colleagues and friends had often observed that I would be a good teacher and had suggested that I take this career path. I had always demurred in the belief that I wouldn't be able to cope with the level of study required but I finally plucked up the courage and did it!" (No 210)</i>
<i>"The urging and support of friends." (No 63)</i>

Thirdly, finding a subject which they wanted to study also provided the motivation to return to education for 5 participants (10%).

I discovered a subject that I thought was worth studying. (10% n = 5)
<i>"Studying a subject that I loved and was good at." (No 78)</i>
<i>"Eventually, disillusioned after 18 years of working in industry, I decided to take a formal qualification in photography, a particular passion of mine for many years, with a view to teaching it." (No 20)</i>

5.3.3 What made going back to studying possible?

Having the motivation to study was not enough in all cases as some practical factors needed to be present to make it possible to embark on further education. Some respondents gave more than one answer which is why the total is not 100%. In total,

seven themes emerged from the responses to Question Five querying the factors that made it possible for the reversal to happen as follows:

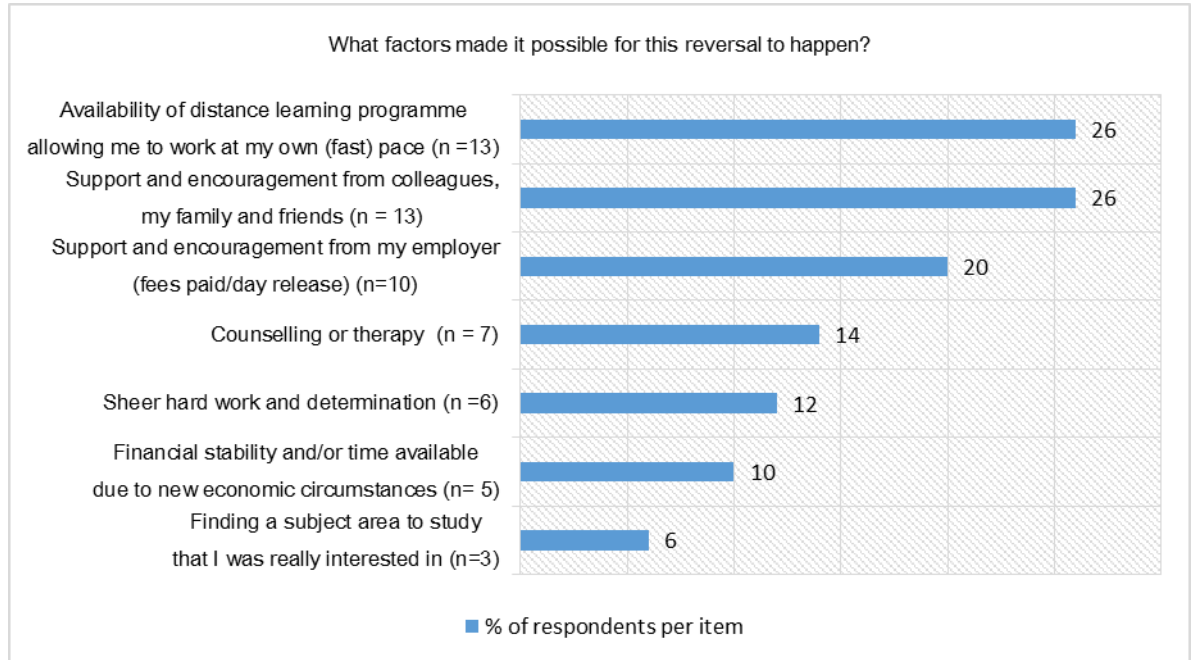


Figure 23: Factors that made it possible for this reversal to happen

The three factors quoted the most were the availability of distance learning programmes (such as, mostly, the Open University), encouragement from friends and family and support from employers. One could suggest that there are therefore two aspects to be considered. Firstly, the practical aspects of an education system that suits a particular learning style and that participants had not found thus far in the traditional education system (Renzulli, 1998; Reis, 2000; Berger* and Francequin*, 2005) and, secondly, the practical aspects of resources such as time and money.

Availability of distance learning programme allowing me to work at my own (fast) pace.

(26% n = 13)
<i>"I discovered distance learning which allowed me to study at my own pace and in my own time." (No 125)</i>
<i>"Studying with Open University suits me. It's a very independent way to study, and I like that. You're not held up by the pace of the teacher or other students!" (No 187)</i>
<i>"The practical convenience of not having to attend classes combined with the absence of all the negative feelings I get in the classroom made a difference. I didn't have to worry about feeling bored because the pace was too slow or it was material I already knew." (No 214)</i>
<i>"As for my OU degree, the fact that so much of it was online made it easier for me as a disabled person to compete on an equal footing." (No 143)</i>

The other aspect to be considered is the psychological aspect. Because of previous failure leading to low self-esteem and self-doubt (Gowan, 1957; Kay et al.*, 2007), the respondents felt that they needed a lot of moral support to help them through their studies. It is possible that the above could apply to many mature students, regardless of their IQ. However, the circumstances that led high IQ individuals to have to study as an adult rather than as a late teenager/young adult may be quite different and the gap between academic potential and previous performance greater than for other individuals.

Support and encouragement from colleagues, my family and friends. (26% n = 13)
<i>"Encouragement from my family". (No 116)</i>
<i>"Some colleagues encouraging me – and me hearing them – probably helped." (No 202)</i>
<i>"Encouragement of other co-professionals." (No 210)</i>
<i>"I had the support of my husband who encouraged me and helped with the children and household. He did not want his wife to work but realised that I needed more fulfilment than I was getting from domestic life." (No 139)</i>

<i>"My husband offered to support me through whatever training was required to do whatever I wanted to do. He was solidly behind me, financially and in terms of allowing me the study time that I needed." (No 96)</i>
<i>"...especially with the support of my husband – having someone in your life who believes in you makes a huge difference." (No 146)</i>
<i>"I guess I still arrogantly believed I had ability. Fortunately, too, even though they could do little for me, so did my mother, my sisters and my closest friends." (No 57)</i>
<i>"With both my Open University study and my search for work friends helped me a great deal, with suggestions, recommendation and encouragement, and with practical issues like travel and living arrangements. I could not have done it without them." (No 57)</i>
<i>"The encouragement of my husband and children (who were, at the time, quite young), both in terms of emotional and financial support, as well as giving me the time and space to study. (No 167)</i>

For 10 respondents (20%), being allowed and encouraged by employers to study whilst working made it possible for them to achieve qualifications as a mature student. Several commented that, without this support, it may have been a lot more difficult, even impossible.

Support and encouragement from my employer (fees paid/day release) (20% n = 10)
<i>"I was made to do day release in my lab tech job. After finishing to the highest level possible, I decided to teach and left to take my first degree prior to PGCE." (No 36)</i>
<i>"Sponsored study through my employment." (No 116)</i>
<i>"Desire to do well at work and the opportunity for day release study. (No 97)</i>
<i>"Day release opportunity from employer." (No 97)</i>
<i>"I was lucky to have the opportunity to do distance learning courses with my first employer, completing a technician qualification in 1999 at the age of 22 before moving on to numerous other courses." (No 47)</i>
<i>"When working in a lab a few years later my supervisor put me up for a day release degree course at North East London College of Technology." (No 62)</i>

Research carried out by Falck (2013) reveals that participants in her study of high IQ individuals in the work place, when not utilising their abilities, experienced negative mental health effects, such as low self-esteem/negative feelings about self; frustration; insecurity; eating disturbances; unwelcome ruminating; feeling that life might be easier/happier if one were less intelligent; depression and, for two interviewees, suicidal thoughts. The following quotations show that 15% of participants to the second questionnaire revealed having needed therapy or counselling before feeling confident in returning to education.

Counselling and therapy (14% n = 7)
<i>"At present I am seeing a brilliant counsellor (he's a Mensan, though I didn't know that when he agreed to see me). It's a bit late to "reverse" my disastrous career but with the help of my husband, writing mentor and counsellor, I'm trying to ensure that my life won't have been completely wasted." (No 34)</i>
<i>"I've had help from family and psychiatric professionals. This has helped me to be where I am today." (No 211)</i>
<i>"Also the support of my psychotherapist who never failed to remind me that I could do it." (No 167)</i>
<i>"Having been through the nervous breakdown and recovered from it through therapy seemed to make me more able to take on challenges somehow." (No 96)</i>
<i>"The therapy gave me a sense of self-esteem, which led to my applying for a university place. Once I began my degree I felt a mounting sense of my own academic capability and this grew as I progressed through my degree." (No 167)</i>

The fact that 'only' 7 participants (15%) sought counselling or therapy could be explained by the age of the respondents, as seeking this kind of help has only become more common in recent years (Siaud-Facchin*, 2008).

In addition, very few counsellors and therapists are trained to deal with the problems specific to high IQ individuals (Webb et al., 2005; Siaud-Facchin*, 2008; Falck, 2013; Nauta and Ronner, 2013; Webb, 2014). One can speculate, therefore, that some of the attempts other participants may have made to seek help in this way may have been unsuccessful and, thus, not mentioned in the questionnaire. Indeed, Falck (2013) reports that the participants in her study did not mention in their questionnaires that they had had to cope with mental health problems or had resorted to psychotherapy or counselling, but yet revealed it during interviews. This was also the case for this study and this highlights that the percentage of respondents fitting this category may in fact be higher.

Indeed, 44 of the non-achievers (27.6%) mentioned having been medically treated for depression - a substantially higher proportion of participants than the general population estimated to be 9% according to the Mental Health Foundation (2007).

Issues of mental well-being as related to high IQ are discussed in greater depth in Chapters Six and Seven.

A smaller number of participants gave the following other factors that made it possible for them to reverse their underachievement.

Sheer hard work and determination. (12% n = 6)

"Sheer determination, very little sleep, and endlessly long hours at work to pay the bills before studying through the night." (No 29)

"I felt privileged to have been given the opportunity to study for a degree despite my previous records and worked very hard at it, often giving up all my evenings and week-ends."(No 75)

Financial stability and/or time available due to new economic circumstances. (11% n =5)

"My husband provided the financial foundation. (No 96)

"The main factor was economic, that is, my being the beneficiary of my late uncle's will, which enabled me to work part-time and thus take a qualification in photography, followed by the FAETC. That said, it was still financially difficult, but I did have a small cash reserve to tide me over while I studied." (No 20)

Finding a subject area to study that I was really interested in. (6% n = 3)

"Studying a subject that I loved and was good at." (No 78)

"Eventually, disillusioned after 18 years of working in industry, I decided to take a formal qualification in photography, a particular passion of mine for many years, with a view to teaching it." (No 20)

5.3.4 Differences between the first and second time around

Eight themes emerged from the responses to Question Six 6 relating to the differences between studying 1st and 2nd/3rd time around, showing a mixture of internal (increase in self-esteem, maturity, renewed sense of direction etc.) and external factors (support from friends and family and availability of a different type of education) as follows:



Figure 24: What was different second time around that enabled you to achieve academically?

These responses highlight the difference it made to 16 respondents (32%) to learn that they were much brighter than they had been led to believe. Once again, one could assume that if this revelation had come earlier, they may have been successful academically earlier and not, as some put it, 'wasted so many years of my life'. However, the counter argument is that a few mentioned that being told or feeling that they were clever made them 'rest on their laurels', also causing underachievement in the long-term. As suggested by Dweck et al., (2004) and McElwee* (2010), knowing that one is clever and being praised for it can also be a cause of underachievement as it may remove the notion that hard work (that can only come if suitably challenging tasks are set) is needed to succeed.

I had more confidence in my ability: I could not be stupid if I was a member of Mensa. (32% n =16)
<i>"I felt that if I could get into Mensa, I could not be as stupid as every told me I was." (No. 216)</i>
<i>"Passing the Mensa test was solid proof that I wasn't an idiot." (No 223)</i>
<i>"When I joined Mensa at age 30 I realised that I must have the ability to do a degree." (No 142)</i>
<i>"It wasn't until I joined Mensa that I actually realised I did have a brain." (No 29)</i>
<i>"The IQ test also had an impact as I now believed I was as intelligent as the others on the course even if my academic record didn't say that." (No 49)</i>
<i>"Having found out that I had a very high IQ gave me confidence I had never had before and the courage to apply to go to university." (No 75)</i>

Maturity and being generally more responsible than when they were at school were also factors highlighted by a quarter of participants tMensa account for the difference between their early and late academic performances as shown in the quotations below.

I had a more mature and responsible attitude to life in general. (26% n = 13)
<i>"The differences 2nd/3rd time around were greater interest, ambition, maturity and confidence." (No 25)</i>
<i>"As an adult paying for my education I had a vested interest in obtaining the qualification. I was also able to better stand my ground and demand better service from the tutors/establishment when issues were encountered." (No 38)</i>
<i>"More mature, self-confident, motivated; I could see the value in what I was doing." (No 116)</i>
<i>"When I was at school I did not want to appear to be an A* student and wasted my talent because of this. By the time I returned to education I realised that this was a very stupid and immature attitude and I behaved completely differently, with success". (No 78)</i>
<i>"I never felt encouraged by anyone earlier in my life, by my parents or teachers, for example, but my gifted son also underachieved despite my encouragement, so it may be partly a question of maturity. I believe I developed maturity later than many others and that my emotional development was slowed by my giftedness." (No 202)</i>
<i>"I was 29 years old and far more mature in my attitude. I also had much more confidence in myself." (No 223)</i>

Intrinsic motivation seems to have been a determinant factor when returning to education and confirms what can be found in the literature about motivation (Stipeck, 1993; Dweck et al., 2004; McElwee*, 2010). According to Ryan and Deci (2000), the direction and degree of energy directed towards a specific task involves two elements: expectation of success and value of success. Indeed, many respondents mentioned that they could not see the point of school and that, in the early years of their schooling, passing tests with good grades without having done any work rendered their success meaningless. In the later years of school, once underachievement had set in, they no longer expected to pass or did not care and, therefore, had 'no motivation' (Siaud-Facchin*, 2002; McElwee*, 2010). Their attitude was different when they returned to education as adults.

Another important factor was support from family and friends as mentioned in some of the quotations above and below.

I had support from people around me (family/friends/colleagues etc.). (24% n =12)
<i>"My husband is also very supportive and encouraging." (No 3)</i>
<i>"A supportive network of caring people and an increasing sense of self-worth." (No 167)</i>

For 11 respondents (22%) there was also a feeling of ownership the second time around that did not exist in their earlier education setting. Having chosen what, when and how to study rather than having it decided for them by others was a great motivator. This underlines the fact that, whilst there is obviously a standard syllabus

to be followed in schools and universities, allowing students to design their programme of studies to some extent may be a good thing for all pupils and students but particularly for high IQ individuals. This is discussed further in Chapter Eight.

I was the one (not my parents/partner/teachers) wanting to achieve. (22% n = 11)
<i>"Becoming more confident about taking charge of my own life and not having to do what my parents/other people wanted." (No 3)</i>
<i>"It was my choice to study at that time, and not something expected/demanded of me." (No 143)</i>
<i>"I think the prime answer to this is that for the first time I wanted to achieve. Previously others wanted me to achieve, whether that was parent, school or Apprenticeship Tutor, and it was not so important in my mind to do so, until after the event when disappointed." (No 42)</i>
<i>"In studying photography I was at least doing something in which I had an interest rather than just studying a subject to achieve a paper qualification." (No 20)</i>
<i>"Being treated as an adult, studying only elements I was interested in and having the additional motivation to progress from the type of work I had done before." (No 49)</i>
<i>"The decision to study was my choice, no matter what the external circumstances were. Now I prefer to study whatever I choose and have no interest in gaining pieces of paper that do not reflect the true quality of what a person knows or understands." (No 62)</i>

An understanding of the reasons why they were studying, what the final outcome would be and how it would impact on their life was also a great motivator for 11 respondents (22%). Several mentioned in the earlier questionnaire that they had received no or very poor career advice and could not see how what they were expected to study at school related to real life. Maybe this is another thing for educators to bear in mind.

I had more definite and practical goals I felt I could achieve. (22% n =11)
<i>"I had some definite goals that I could see and were measurable. By this I mean that I could pass exams and prove I could do it." (No 22)</i>
<i>"At last, I had a definite goal." Also For the first time, I had some awareness of my potential and direction." (No 63)</i>
<i>"This time around there was a point in studying as I could see that getting more qualifications would get me a better job and more money. I somehow did not understand that when I was at school." (No 47)</i>
<i>"Once I had passed the first year exams with decent grades I felt that my goal was attainable and the prospect of the promotion my degree would bring became a huge motivator". (No 77)</i>
<i>"I had decided that I wanted more for myself and the only way to achieve this was to get some qualifications". (No 66)</i>

The next three items about what made it possible to go back to studying are similar to those expressed in responses to the above question about what gave respondents the motivation to go back to studying and therefore are not discussed further here.

I was able to study at my own pace on my own or with like-minded people. (20% n = 10)
<i>"At undergrad level, I eventually discovered distance learning which allowed me to study at my own pace." (No 125)</i>
<i>"The absence of a classroom environment and all the negative feelings that it brings out in me nowadays – plus not only the chance to study at my own pace within the remit of the course deadlines but also without judgment." (No 47)</i>
<i>"Having started and applied myself to the work required for the MSc, I felt a lot of satisfaction in solving problems, overcoming weaknesses in parts of my general education and working with like-minded and similarly motivated individuals." (No 52)</i>

I had chosen what I wanted to study. (16% n = 8)

"Studying a subject that I loved and was good at." (No 78)

*"In studying photography I was at least doing something in which I had an interest rather than just studying a subject to achieve a paper qualification. Even then, I found the environment of college difficult, and even more so when I was studying for the FAETC, which was at that stage becoming a necessary qualification for those wishing to teach."
(No 20)*

I had learnt to work hard in my professional life and applied this to studying. (16% n = 8)

"By then I had learned to work hard (in the workplace) and approached college work in the same spirit (highly motivated, and prepared to "do whatever it took" to succeed)." (No 2)

"I suppose the benefit of having worked for a year before we were allowed to start studying by any means also gave me some self confidence that I might cope with studying" (No 46)

5.3.5 Personality traits that may have affected earlier underachievement

Answers to Question Seven asking whether the earlier underachievement had been affected by particular personality traits were polarised and very difficult to analyse and did not yield conclusive results. The analysis of an individual's personality is complex and the question asked in the questionnaire in relation to this aspect of the participants' experience was not of a nature that could allow significant conclusions. The aspect of personality as a factor in academic underachievement was explored instead in the interviews and commented on in Chapter Six.

However, what is interesting to note here is that, although a few respondents said they had hated school right from the start, the majority remembered being happy and extrovert in the first few years of school. Yet, they remembered gradually feeling more and more disengaged, unhappy, like a 'misfit' and in some cases increasingly wanting 'to become invisible' and 'be left alone'.

In other words, negative experiences of underachievement may have led to some changes in personality or behaviour over the years. Similarly, respondents reported having become much more confident and outgoing since their academic success and said that they 'felt like a different person now'. It could therefore be argued that achievement and underachievement may have had an impact on personality and behaviour in the same way as personality and behaviour may have had an impact on underachievement.

5.3.6 High IQ as a factor of underachievement

When asked in Question 2 to give the reasons for their underachievement, 26 (52%) had mentioned being bored at school. In Figure 8 below, 16 (32%) indirectly explained the reason for their boredom by mentioning the fact that they thought differently and processed information differently, which they found out was problematic in the school context, a phenomenon described by Souza (2002) and Souza (2006). One example of this given by Siaud-Facchin* (2008) was of a six-year-old child receiving a zero mark for the question "What do a cat and a mouse have in common?" Instead of saying 'they are both animals', the girl had attempted to explain that they were both predators, both pets, both carnivores, none of which were in the model answer. Like this girl, many gifted children become very confused about what is expected of them because it seems too simple. As a result, they gradually learn to keep their thoughts to themselves, thus becoming increasingly alienated with what is going in the classroom.

They start to believe there must be 'something wrong' with them because of their way of thinking (Gross, 2004; Siaud-Facchin*, 2008). As they can usually understand concepts very quickly, they may feel that 'they know it all', they are bored, become despondent and, by the time they can no longer rely entirely on their innate ability to process information, they have missed out on learning how to learn

and study. As Delisle (1994) proposes, they have gradually learned to underachieve.

A minority had an undiagnosed learning difficulty such as dyslexia, dyspraxia, attention deficit disorder or other which was compensated for or hidden by their high IQ. As already reported earlier, 'dual exceptionality' makes it harder to overcome academic underachievement, which may explain the low percentage here amongst those who reversed their underachievement.

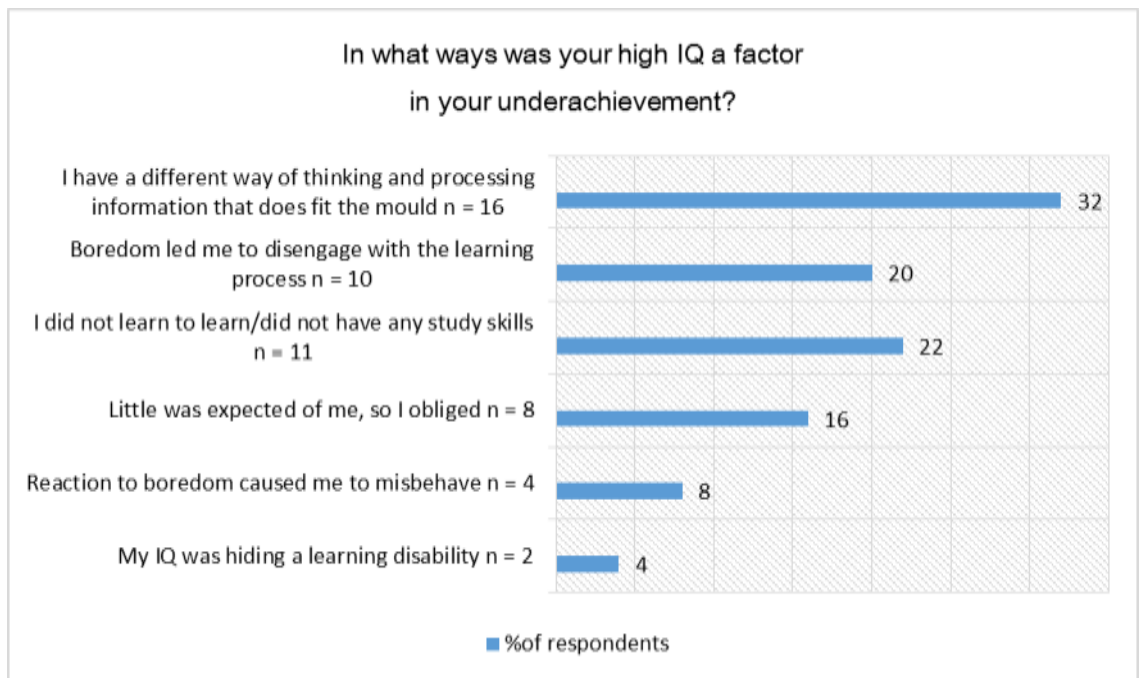


Figure 25: In what ways was your high IQ a factor in your underachievement?

Some respondents gave an answer which was not relevant to *academic* underachievement /deferred *academic* achievement and some gave more than one answer, which is why the total is not 100%.

Many of the above items were explored in Chapter Four.

5.3.7 High IQ as a factor in the reversal of underachievement

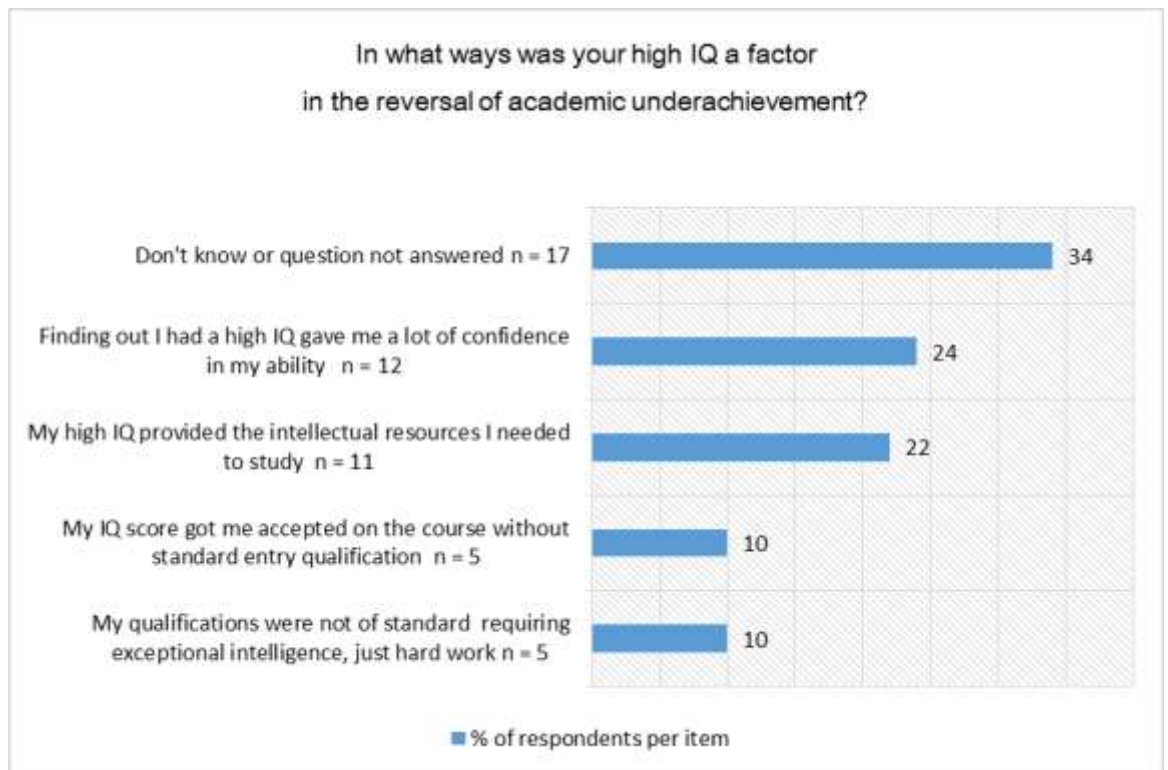


Figure 26: In what ways was your high IQ a factor in the reversal of academic underachievement?

When asked if their high IQ had been a factor in the reversal of their underachievement, 17 (34%) of participants could not explain how their high IQ had contributed to their delayed achievement and 5 of them (10%) said that, even when studying for undergraduate or postgraduate degrees, they had not felt 'stretched'. It could be deduced from this that a high IQ was not perceived as needed to obtain those academic qualifications. Several commented that being a graduate today is not a proof of being intelligent – several bemoaning the lack of distinction in people's minds between knowledge acquisition and intelligence.

Don't know or question not answered. (34% n = 17)
<i>"Studying for my degree did not particularly require me to be intelligent. It was more a case of being diligent." (No 26)</i>
<i>"I don't really know if my high IQ was a factor in obtaining my degrees. Others on the same courses as me which I perceived as much less intelligent also passed with equivalent or even better results." (No 98)</i>
<i>"IQ is a reflection of intellectual functioning and of the ability to think critically and be creative. By contrast most of education seems to be more about acquiring knowledge. I don't think I had the opportunity to make the most of my high IQ in my undergraduate studies as it did not seem to be required." (No 112)</i>
<i>"I guess it takes some level of ability to be able to teach yourself by distance learning (self-study where there is no tutor contact whatsoever) but a high IQ? I don't know." (No 47)</i>

However, a quarter of respondents remarked that, once their perception of themselves changed because of passing the Mensa test, the confidence in their

ability grew. They reported that their high IQ was, therefore, an indirect but important factor in their delayed success.

It was not until after they had discovered their high IQ and returned to education as an adult (or even until they had to complete this questionnaire) that they had started to reflect on and understand the reasons why they had underachieved at school. Joining Mensa and meeting like-minded people, in particular, had helped them understand themselves better and made them realise that, as suggested by Souza (2002), the different ways in which they think, process information and tackle problems and their solutions was a product of their high IQ and was a positive factor, not a negative one.

Finding about my high IQ gave me confidence in my ability. (24%) n =12
<i>"After proving to myself that I have the ability (being accepted as a Mensan) I felt a lot more confident to tackle the degree courses in later life." (No 42)</i>
<i>"Speed of learning did help when I studied for my professional exams." (No 29)</i>
<i>"My high IQ also enabled me to pass examinations with the minimum of study." (No 77).</i>
<i>"The fact that I have an adaptive and creative thinking process is what helped me obtain my qualifications." (No 62)</i>

In addition, 10% had been given the opportunity to be admitted for study at undergraduate level without formal qualifications thanks to a high score in some form of admissions IQ test.

5.3.8 What help do you think could be provided for returners to education?

When asked what help was needed from the education system to facilitate reversal of academic underachievement in later life, 2 respondents (4%) misunderstood the question as "What should be done for children with a high IQ?" Their responses are considered in Chapters Seven and were not included here.

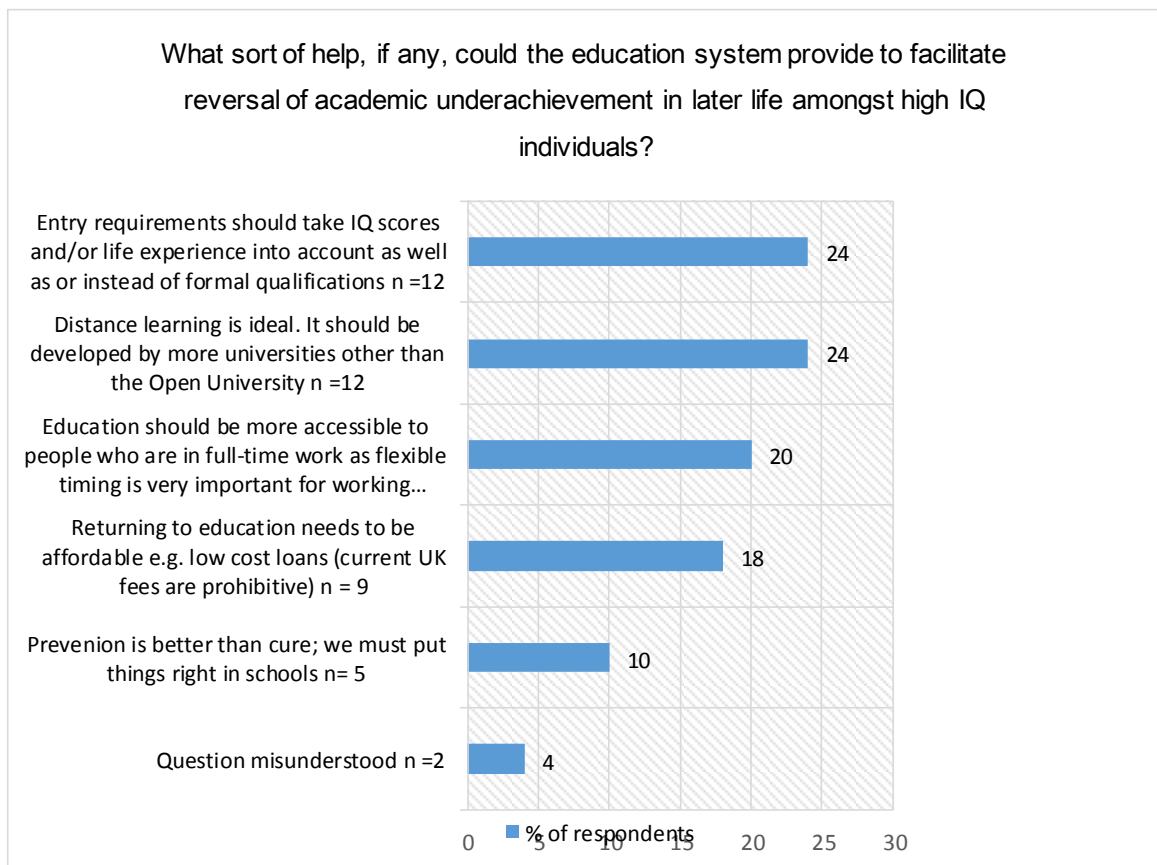


Figure 27: What sort of help, if any, could the education system provide to facilitate reversal of academic underachievement in later life amongst high IQ individuals?

Allowing IQ scores to replace standard entry qualifications such as 'A' Levels was seen by 12 (24%) of respondents as a simple way for universities to make it easier for them to return to education as an adult. Indeed, since, for example, 'the American Standard Achievement Test (SAT) used to assess students' academic potential is basically an IQ test' (Stanovich, 2009:3), it would seem logical to accept a high IQ score as an entry criterion for non-standard university applicants. The current British system of Access courses for students without relevant academic qualifications is unlikely to suit high IQ individuals who need higher intellectual stimulation than the norm (Gagné, 1993; Cutrona et al., 1994). They could in fact be a reminder of the lack of stimulation provided at school and, therefore, a deterrent or yet, another cause of failure.

More flexibility in the modes of learning, such as part-time particular, were seen by 10 (20%) as other ways of making it easier for high IQ adults to return to education and distance learning in particular was quoted by 12 (34%). Furthermore, 9 (18%) of participants mentioned that if the university fees had been then what they are today, it would have been impossible for them to return to study. One could assume that the above would apply to many mature students, not just high IQ individuals.

5.3.9 In what ways did acquiring late academic qualifications enhance your life?

In Figure 28 below which refers to whether acquiring late academic qualifications had enhanced the participants' life, 11 participants (22%) found it difficult to decide whether their late academic qualification had enhanced their life or not and 7 (14%) said that it had not, but none provided enough information that would make it possible to draw conclusions.



Figure 28: In what ways, if any, did acquiring academic qualifications enhance your life?

The above shows that one could speculate that, if intellectual rigour was what they sought rather than qualifications when studying as an adult, they may have been just as disappointed as when they were children by the lack of intellectual stimulation provided by their delayed academic achievement. This would confirm thoughts expressed in the responses to Question Eight Part two by those who felt that their high IQ was not really used in their undergraduate studies.

As participant 62 put it:

"I just no longer wish to participate in the cattle market that education has become. I see things in a different way from other people. I think that is what a high IQ is. Having a long list of academic credentials is no proof of intelligence."

Amongst the 32% who said that acquiring academic qualifications had helped them professionally, all but two had acquired their first qualifications before the age of 35. Their qualification had enabled them to embark on a career which they say would have been impossible without a degree. Those who acquired qualifications in their forties and beyond said that the qualification had come too late (see figure 29 below) and that, by that time, it was impossible to catch up professionally with their peers who had years of experience in their field as well as relevant qualifications. Several mentioned that employers, whilst supportive of younger employees wishing to

improve their qualifications and skills, did not take seriously individuals who decided to go to university in their forties or fifties.

Another 32% felt that their delayed achievement had had a huge positive impact on their self-esteem even if it had not helped them professionally and they commented that feeling better about themselves had enhanced their life greatly. As previously mentioned and quoted in Chapter Four, several said that they had learnt to hide the fact that they were a member of Mensa as it made people incredulous as incompatible with their academic and professional record.

5.3.10 Do you wish reversal had happened sooner and why?

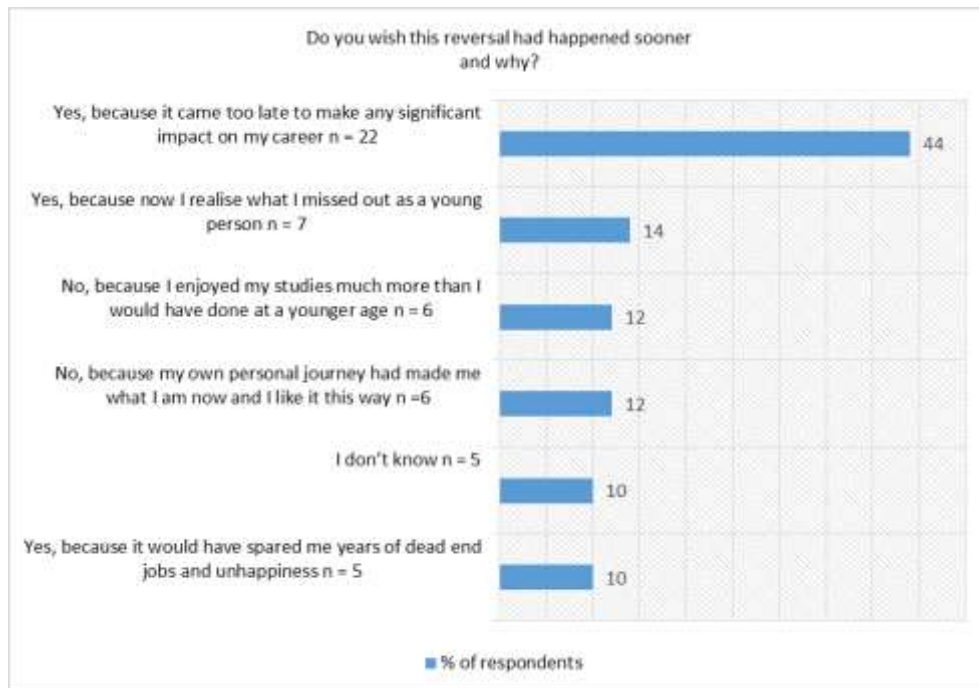


Figure 29: Do you wish this reversal had happened sooner and why?

When asked if they wished that reversal had happened sooner and, - if so, why - 22 (44%) said that they came too late. This seemed to be related to the age at which the qualification was obtained. Responses to the previous question showed that 16 (32%) had said that acquiring academic late qualifications had helped them professionally. Here, those who acquired their qualification late in life wished it had happened sooner as it might have enhanced their life much more in terms of career, 9% saying that it could have saved them years of 'dead-end' jobs and unhappiness.

Yes because it came too late to make any significant impact on my career. (44% n = 22)
<i>"I very much wish the reversal had come earlier. Not having qualifications had a very detrimental effect on my working life and earnings." (No. 25)</i>
<i>"I would have had a better paid career, with more interesting work. I regret I had not had the opportunity to go to university at 18 as this would have led to a different career path." (No 144)</i>
<i>"Sooner would have been better. Graduating at 50 was a boost to my self-esteem but a little late for it to influence my career!" (No 142)</i>
<i>"I wouldn't have been so miserable and unhappy if I had completed my degrees earlier. I could possibly have had a good career in either the law, the media or politics which was my secret ambition." (No 3)</i>
<i>"Overall, it took me two decades to recover to where I could have been if the problem had not happened at all. That total loss, in money, happiness, to myself, my family, and to society as a whole, could have been avoided if things had been quickly put right at the very beginning." (No 57)</i>

Of those who went to university as mature students, 7 (14%) witnessed how different the life of eighteen-year-old students was from their life as an eighteen-year-old working individual and felt that they had 'missed out'.

Yes, because now I realise what I missed out as a young person. (14% n = 7)
<i>"By the time I went to uni I was too old to enjoy the same things as 18 year old students and I still regret having missed out". (No 45)</i>
<i>"One should not have to go out to work at 16. I certainly encouraged my children to live to the full whilst they were young and free. I did not want them to miss out the way I had." (No 26)</i>

"At the Open University summer schools I think people were trying to pretend they were young students to compensate for having missed out but it did not quite work." (No 17)

Yes, because it would have spared me years of dead end jobs and unhappiness. (10% n =5)

"The reversal could probably have happened much sooner had I been aware of my high IQ so I wish this had been the case. I suffered many years of anxiety and depression which I might have avoided." (No 49)

"I wished I'd done A levels and progressed to university at age 19. I wasted many years of my life in dead-end jobs." (No 223)

"Acquiring late academic qualifications has given me a new-found sense of self. I wish I had had the chance to take A-Levels and go to university after leaving school; my life could have been so different." (No 167)

However, 6 (12%) participants commented that university was 'wasted' on young people as many of them seemed to go to university for the extra-curricular activities or to get a qualification rather than for the love of learning or passion for a subject. As mature students, they had made much more of their studies.

No, because I enjoyed my studies much more than I would have done at a younger age. (12% n = 6)

"Studying as an adult has been very rewarding and a self-affirming experience." (No 116)

"I don't wish it had happened sooner. I appreciated it more and got much more out of it precisely because it came later." (No 63)

"It has not served me in any way with regard to work but it enhanced my life as I discovered a joy of learning which had eluded me when I was younger." (No 62)

6 (12%) had no regrets because they liked who and where they were now, saying that regrets did not serve any purpose.

No, because my own personal journey had made me what I am now and I like it this way. (12% n = 6)

"If I had gone through the traditional route straight to Uni, I would have missed out on an unusual insight into the way lives can be wasted if we take the wrong direction at one of life's crossroads. This still horrifies me and, as a teacher, has helped me guide my pupils (especially as I was once expelled from school!!)." (No 36)

Not acquiring qualifications at a younger age gave me ability to feel more independent. I don't think I would have known what to do with my life at 18." (No 139)

"It was difficult to start an academic career in my forties, as I was just running out of my remaining working life. However, I'm happy with my life now, and I wouldn't change it." (No79)

"I believe that things happen for a reason, even if we do not know what that reason is. I am proud of what I have achieved later in life and have no regrets." (No 96)

"As Douglas Adams said: I may not have gone where I intended to go but I think I have ended up where I needed to be". (No 221)

5.4 Extra information provided by the respondents

In addition to the above, a number of interesting comments were made that did not necessarily answer the questions directly but added an extra dimension to the participants' experience of underachievement.

Several participants mentioned being interested and competent in so many areas that they found it difficult to choose and concentrate on just one, as illustrated by their comments below.

This confirms what the literature revealed (Plucker, 2001; Siaud-Facchin*, 2002; Heller, 2004; Terrassier* and Gouillou*, 2008, Webb 2014).

Competence in several domains
<i>"Another great hurdle for me was the fact that I am competent at almost everything I try, academically, physically, creatively and artistically. I love so many things, it would be like choosing a single puppy from a beautiful litter." (No 9)</i>
<i>"My lack of any specific ambition may relate to the fact that I was interested in, and showed talent in, many areas, so it was difficult to focus on just one." (No 68)</i>
<i>"I have never known what I want to do in the future, the choice is too great." (No 208)</i>
<i>"I have been described as a 'polymorph' by those in the know – i.e. I'm good at everything I turn my hand to. I have a degree in chemistry, an accountancy qualification (FCCA), two music diplomas and have just taken my flute performance LRSM as well as studying for a new degree." (No 151)</i>

As illustrated below, miscellaneous comments were made about high IQ children having special needs.

The special educational needs of high IQ children
<i>"It seems to me that people must have been aware that I was unusually clever at a young age. My mother wrote in my Baby Book that at the age of eighteen months I could sing songs and nursery rhymes to the correct tune; repeat any word; say full sentences and count to twelve. My "remarkable memory" was noted at the age of two. Why didn't somebody do something about it when I said I was completely bored?" (No 6)</i>
<i>"I was identified by my head teacher at the age of nine as a 'gifted' child, but nothing was done about it as if being clever was an advantage and therefore I did not need special treatment. It does!" (No 55)</i>
<i>"When I was 5 or 6, my mother attended a parents' evening and was informed that during one lesson, the teacher had prescribed some work to be done. Ten minutes later she looked up and I was messing around, apparently. I informed the teacher I had completed the work to which she replied, "You have not even started yet". She came over and checked and, not only had I finished the work, but had gotten all of it correct. My mum always says to this day that you would have thought that this would have given them a clue as to my ability and something done about it. In fact I think this teacher and others later hated me for being smarter than the rest and 'punished me' for it. It was very demotivating. I left school with one GCSE grade D."(No 39)</i>
<i>"I think that the worst thing you can do to a clever child is not teach them that what matters is effort and hard work by rewarding them for something they value rather than stupid tests they can do standing on their head and are completely meaningless to them." (No 63)</i>

"I think high intelligence has to be designated a special educational need. I have a strong memory of being patient with tasks that I found boring and routine in school and always hoped that it would get better and more interesting. It never did. When my primary teachers turned on me for being clever, as I saw it then, I began to reject the notion of school as it was presented to me then. I was lucky, my secondary teachers caught me and stopped me from falling into the abyss." (85)

"If I could meet myself as a child I would just keep telling him that you are smart but you need to work." (No 101)

"I had no ambition or motivation because what I was expected to achieve seemed so mundane. I was not interested." (No 224)

"I guess I avoided so much through fear of being exposed as the idiot I thought I must be, not realising the others were the idiots." (No 35)

"How sad that educational circles still don't seem to be identifying and helping gifted children. One always assumes that things have moved on since one's own childhood. Apparently not!" (No 226)

The other three series of comments related to the long-term effects of academic underachievement and referred to the adult experience - elements not found in the literature.

The first one was sadness at the fact that their academic achievement had come too late for their parents to see it.

Academic achievement came too late for parents to see it

"I feel some sadness to think that I didn't match up to my parents' expectations of me. I would have liked to have made them proud of me. By the time I did well academically they were no longer around." (No 48)

"I feel sad that my dad who always believed in me died before he could see me achieve anything academically. He would have been so pleased for me." (No 69)

"I feel sad now that my dad never saw this situation, me with two degrees, because he had great faith in me and was saddened himself that I did not appear to follow him in his academic and professional successes." (No 42)

The second one relates to the long-term impact of earlier underachievement on self-esteem and confidence, as explored further in Chapters Six and Seven.

"Although much had improved for me over my life and my general confidence was good, I found that in academic study I was still affected by memories of my experience at xxxxxx and its aftermath. I was still terrified of academic failure because of the awful consequences it had brought to me earlier in life. Although I tried to control it, I think this fear stifled my ability to completely relax and put forward my best effort." (No 57)

"My ultimate punishment was not being awarded the Primary 7 Dux Award because of my "attitude", despite me winning fair and square. To this day, I have never worked through that injustice and disappointment and it certainly affected my secondary career." (No 85)

"Being 'a failure' affected my self-confidence and had a negative impact on the whole of my life." (No 139)

"I do truly believe I wouldn't have reached the low point that I did after leaving sixth form college and indeed would have a little more self-confidence to this day. Each year the A level results come out I can't help feeling afresh how stupid I must be to not have met such apparently un-missable targets!" (No 47).

"I am to a very large degree still overcoming my academic failure. I don't think I will ever overcome the initial failure so am embarked on a course of damage limitation". (No 38)

"I cannot bounce back from that because the opportunities have passed." (No 42)

Thirdly, several participants reported unexpected positive consequences of earlier underachievement.

"Interestingly, I seemed to have developed as a very good teacher myself; good results with my pupils, particularly good with bright (and difficult) children and apparently well-liked. I am definitely not aware of deliberately trying to be the opposite of the teachers who 'failed' me, so maybe an unconscious 'osmosis' was at work." (No 85)

"Writing all of this has given me an insight into why I might want to be the type of teacher I am, or indeed a teacher at all; to give people a better experience than I had, with more support for academic and emotional issues – thanks for making me realise this!- from the teachers." (No7)

5.5 Significance of results

5.5.1 Negative consequences of delayed academic achievement in adults with high IQ

The responses to the second questionnaire highlighted that, whilst high IQ children are very much ahead of their peers in terms of reading, speaking, story-telling, arithmetic and science, they can 'lose' up ten to twenty years of their lives due to academic underachievement. Indeed, 33 (66%) respondents wished that their academic achievement had happened sooner as their lack of academic qualifications often had had a very negative impact on their working life and earning potential. In the cases when an undergraduate degree had come late (forties/fifties), the delayed academic achievement had made no difference to career prospects. It appears to have been useful solely in an economic sense when it happened by about the age of 35 years.

Of those who studied for a BA or a BSc (as opposed to professional qualifications) 25 (50%) did so via the Open University. They reported that distance learning felt perfectly adapted to their special needs and avoided the problem of everything being too easy and boring as it was at school. Several participants mentioned that the Open University should have a higher status and reputation to reflect the consistently high quality of the material taught and the demanding nature of self-study.

Feeling a 'failure' and spending years working in unchallenging jobs because of lack of qualifications had been extremely difficult. 7 (14%) of the respondents to the second questionnaire reported that their academic underachievement had led them to seek the intervention of counsellors or psychotherapists. However, among the original sample, 27.6% had reported having been treated for depression, indicating perhaps that suffering from depression is more likely amongst those who do not make up for their academic underachievement.

In the interviews, participants revealed mental health issues that they had not mentioned in their questionnaire. Falck (2013) experienced a similar phenomenon in her study of high IQ adults in the work place. There would seem to be a stigma attached to mental health issues which participants were reluctant to reveal and the figures could therefore be much higher than highlighted here. Indeed, according to the World Health Organisation (2012), despite a lot of publicity surrounding mental illness, there is still a major stigma associated with depression and many employers are not dealing with it adequately.

Many respondents mentioned that the need for academic qualifications was more acute for their children than it was decades ago, whilst studying for a degree had seemingly become less challenging. Several participants commented that, as high IQ individuals who had underachieved academically, they felt even more frustrated

than in the past at not having qualifications. They mentioned finding it hard to have to work alongside young graduates whom they saw as 'not particularly intelligent' but who seemed to feel superior for having a degree.

5.5.2 Circumstances making delayed academic achievement possible

There were both extrinsic and intrinsic factors enabling a return to education. The former related to the need for a better job and increased earnings, the support of employers as well and encouragement from family friends. The latter related to increased self-esteem brought about by the discovery of their high IQ and the feeling of having gained control over what, when and where they wanted to study.

Indeed, being able to study by distance learning at their own (fast) pace was seen by the majority as a very important contributing factor to their late success. Several mentioned that if they had been able to study like this as a child, they may not have become so bored. They suggested that they could have enjoyed and benefited both from acceleration and enrichment which are recognised successful ways of catering for gifted children's special educational needs. Chapter Eight offers suggestions based on the interviewees' views about the concept of an Open University-type system for primary and secondary school high IQ children.

Having become aware of their weaknesses in terms of study skills had enabled some respondents to devise strategies for studying at university level and become successful second time around.

It would seem that the variables which affect the achievement of gifted subjects negatively and result in underachievement are both static and alterable. Those that are alterable, like the ones mentioned above, appear to be those that can lead to reversal of underachievement.

5.5.3 Barriers to returning to education in adulthood

It needs acknowledging that 65 of the original participants (41%) had not reversed their academic underachievement and did not expect to ever do so. Barriers to returning to education affected them even more than the late achievers. In particular, low self-esteem and low confidence engendered by past failure were very common for them. Some participants revealed that underachievement had caused them so much pain that they now rejected all thought of further venture into any type of formal education. Some of the late achievers also said that it had taken them a lot of courage to embark on their journey of delayed academic achievement and that, despite having passed the Mensa test, they still suffered from self-doubt because of past experiences. Indeed, being unaware of one's IQ or of the reasons for one's

difference was felt to have played a significant part in deterring individuals for considering returning to formal education in adulthood.

Formal qualifications being the only ones accepted on the majority of traditional university courses was seen as a major barrier for high IQ individuals who underachieved at school. The types of 'Access' courses offered by some British University for students without relevant academic qualifications was seen as ill-suited for high IQ individuals. As they need higher intellectual stimulation than the norm (Colangelo et al., 2004; Groos, 2004) such courses could in fact be a deterrent because a reminder of the lack of stimulation provided at school and another cause of 'failure'.

The financial cost was seen as one of the main barriers of returning to study as a mature student. Without standard qualifications the only way of studying for a degree was with the Open University which charged fees at a time when other universities did not. The situation is different now since all universities charge fees and the Open University fees are now much lower (£5,200 per 120 credits/one year of full-time study as opposed to £9,000 per year in 2014). Some participants remarked that it would have been totally impossible for them to return to study if the circumstances had been then as they are now, especially as student loans for part-time students are very difficult to obtain. Having to pay the current fees for obtaining academic qualifications late in life was seen as likely to be a very poor return on

investment. Those who were sponsored by employers said that they would not have been able to cope without their support.

Finding the time to study for those who were working to finance their qualifications or who had a young family was also problematic. This is true for many mature students but those high IQ late achievers felt that there was a degree of unfairness in their situation in that, their having to study as a mature student was the result of earlier failures on the part of the education system. One respondent likened having to study as a mature student with having to undergo chemotherapy because of his cancer having not been detected in time due to mistakes and lack of care from the medical profession.

Mental health problems resulting from feelings of inadequacy linked to their early underachievement (and indirectly their high IQ) was a barrier to returning to education for some participants and necessitated medical treatment or the intervention of counsellors and psychotherapists. This is explored further in Chapters Seven and Eight.

Furthermore, having a learning difficulty in addition to the special educational needs of high IQ children (dual exceptionality) and/or having a family background unsupportive of education seems to have been a barrier to academic success in later life. However, socio-economic background and reports of being bullied as a

child do not appear to have been a major cause of difference between this sample of underachievers and the sample of late academic achievers.

5.6 Conclusion

This chapter examined the responses to a questionnaire completed by the 50 individuals (from the first sample of 158) who had revealed that they had reversed their academic underachievement in adulthood.

One of the aims of the questionnaire was to understand what had been the differences between the participants' experiences of education as a child and as an adult. Out of this sample of late achievers, 25 (50%) of those who had studied for a Bachelor's degree had studied with the Open University. They felt that they had been able to obtain their degree and to enjoy the experience because of the distance learning element format. They felt that it catered for their independent learning style that made it possible to study at their own pace and to 'dip in and out' of tutor support when needed. However, whilst acquiring academic qualifications had been good for 32 (64%) of them in that it boosted their self-esteem, only 16 (32%) of the participants felt that it had helped them professionally, mostly because they had come too late to make an impact on their career.

Chapters Four and Five made the voices of participants heard and provided many of the answers sought by the research. Yet, it was felt that there was an element missing as this voice had only been 'heard' on paper via questionnaires. The issue of personality and poor social skills as possible causes of underachievement had been raised by a number of people interested in this research. Consequently, it was decided, in order to build some personal profiles, to interview ten of the participants who had already completed the two questionnaires.

It was thought that meeting some participants face to face may provide the opportunity of 'digging down deeper' and uncovering other aspects of the phenomena explored that were not revealed by the questionnaire due to its very nature. This made it possible to build ten profiles described and analysed in the findings from the interviews in Chapter Six.

CHAPTER 6

Interviews and Personal Profiles

6 INTERVIEWS AND PERSONAL PROFILES

6.1 Introduction

This chapter deals with the analysis of the one-to-one interviews which, combined with data previously collected from the same individuals via two questionnaires, formed the basis for building and comparing ten personal profiles. This analysis completed a process of narrowing down from the results of large samples (158 and 50 participants respectively) to that focused on ten individual participants.

Details of how participants were recruited, how the interviews were conducted, and the transcripts analysed can be found in the Methodology Chapter.

The rationale behind conducting one-to-one interviews was to investigate, with a smaller sample and in greater depth, the issues raised by the research questions and to fill gaps that the questionnaires analysed in Chapters 4 and 5 may have left.

Meeting and interviewing these ten participants made it possible to build a more accurate and complete picture of their persona and life trajectory.

The perceptions of the causes of academic underachievement having been extensively covered in the Literature Review Chapter and Chapters Four and Five, the interviews concentrated on whether there were alternative perceived causes of underachievement not highlighted in the surveys or the literature. For example, it seemed useful to investigate further the exogenous factors (e.g. socio-economic background, family environment, or type of school attended) and endogenous factors such as personality traits and personal values and beliefs as well as the possible interaction between the two and resulting aspects of long-term impact not mentioned thus far.

According to Webb (2014), most of the difficulties experienced by high IQ individuals arise from the interaction of personal characteristics with the cultural settings, attitudes, and value-milieu within which they may find themselves. The combination of these characteristics and interactions with situational factors are what can sometimes lead to problematic patterns.

A summary of the findings of the interviews can be found in appendix 11 and the significance of these findings is discussed in 6.4 and Chapter Seven. Tables 30 and 31 in 6.4 provide an overview of the long term effects of academic underachievement in high IQ adults, both in personal terms and for society, combining the results of the questionnaires and interviews.

The table in appendix 11 is divided into ten columns - each corresponding to one of the participants - and 14 sections forming the constituents of their profiles. This layout makes it possible to read the table vertically and, as such, have an overall picture of each interviewee as well as to read it horizontally in order to draw comparisons between the participants.

In addition, as shown in appendix 18, a number of themes, not all of which identified previously, came to light in the interviews and these themes are illustrated in 6.3 under specific headings with quotes from the interviewees. The numbers shown after each quote indicate the number given to each interviewee and the precise time during the interview at which they expressed a particular thought.

Based on this sample, which is admittedly small, it was possible to distinguish between what constituted differences between the interviewees and what constituted commonalities.

6.2 Main differences between the interviewees

When asked to describe their childhood socio-economic background, participants used the following terms: three said that it was working class, three lower middle class, one middle class, and three professional/middle class. The three who said

that it was working class reported that school was not seen as important in their family, just something you had to go through as part of growing up until you could start working and earning a living. Two of them said that they were actively discouraged from any academic pursuits and encouraged to learn a trade, especially as their school results were poor.

Out of the three who described their background as lower middle class, one felt that his parents were supportive of education and wanted him to do well whereas the other two never felt really directed towards academic study beyond the age of 16 or 18 years old.

The three participants who said that their background was middle class/professional reported that their parents were very supportive of education and probably disappointed about their child's lack of academic success although this had not been expressed openly.

The above confirm what research has revealed over parental educational aspirations depending on their social class (McGillivray, 1964; Cutrona et al., 1994; Cline and Swartz, 1999; Dickens et al., 2001; Russell International Excellence Group, 2013).

When talking about their childhood family context, one described it as toxic, two as unhappy and unstable (father in the army and parental divorce; fathers' death and ensuing financial difficulties), three as caring but not particularly supportive of education and four as both loving and caring and supportive of education. How parental support affects academic achievement or underachievement has also been well researched over the last few decades (McGillivray, 1964, Cutrona et al., 1994, Russell International Excellence Group, 2013). Yet, in this sample, academic underachievement had been experienced, regardless of the support interviewees may have received from their parents towards academic achievement.

The way they described the type of primary schools they attended ranged from five 'good' (two of which private schools), two 'poor', two 'nothing special' and one 'a succession of different schools due to father's army postings'. As for their secondary school, three described it as a 'poor' inner city or large comprehensive school, six as a 'good' local grammar school and one as a good private school for day boarders. The type of school attended, therefore, did not seem to have made a particularly significant difference between the participants in that they all felt that they had underachieved academically at school, yet had managed to reverse this underachievement later in adulthood.

Four participants reported finding the curriculum very easy and enjoying being the star pupil for most of their elementary school years. On the other hand, three reported hating school from day one until the day they left, because the curriculum was so easy as to not make sense. The other three had mixed feelings about their school years – their memories of it being that it was easy and boring and fairly ‘meaningless’

The differences highlighted between the interviewees, therefore showed a wide variety of socio-economic backgrounds, family contexts and types of school attended. As a result, this makes it difficult to pinpoint to any particular one that could be seen as a dominant possible cause of early academic underachievement. In other words, within this sample, the underachievement of high IQ children was not confined to a particular group of individuals or setting. One could suppose that, if this were to be the same with a larger sample, the phenomenon of ‘gifted underachievement’ could be said to span across a wide range of contexts.

In terms of coping with their underachievement, four opted to become ‘the class clown’ and blamed their fall from grace in their later school years on their ‘silly’ behaviour. Another four lost all interest in school matters and simply waited for compulsory education to end. The remaining two reported making themselves as invisible as possible so as to be left in peace. All the above various ways of reacting

to a lack of intellectual stimulation in the school environment have been well known for a long time and were highlighted in the Literature Review (Hollingworth, 1937; Gross, 2004; Hargrove, 2010; Webb, 2014).

When asked about their level of academic underachievement, seven said that they had left school at 16 with only a handful of 'O' Levels or G/CSEs. Two had obtained poor 'A' Levels which barred them from going to university and one had obtained good 'O' levels and good 'A' levels but had dropped out of university before the end of the first year.

As for the highest qualification obtained as a mature student, they ranged from a Higher National Diploma (one participant), one Further Education Teaching Certificate (two participants), one Bachelor's degree (three participants), two Bachelor's degrees (three participants), one Master's degree (two participants), two Master's degrees (one participant), and one PhD (one participant). Several had also acquired various professional qualifications. Just as the level of academic underachievement varied depending on the individual, so did the extent of the reversal.

Five of the participants felt resentful towards the education system that had stopped them from progressing academically whilst the other five felt that their experience

had made them what they are today and they were happy with this state of affairs. In the original sample of 158, 12 participants (7.5%) had reported that their academic underachievement had had a positive impact on their life and 22 (14%) that it had had a mixture of positive and negative consequences. It would appear that, amongst the interviewees, those who had discovered their high IQ at 18, 23 and 26 (as opposed to in their thirties or forties) had returned to education and obtained qualifications much earlier than the others. This had enabled them to embark on a career at a young enough age to make a positive difference to their professional trajectory. This was not the case for those who had reversed their underachievement at a later stage in their life.

However, as well as the above differences, a number of commonalities were also uncovered as shown below.

6.3 Similarities between the interviewees - recurring themes

Having established and confirmed the differences mentioned above, the interviews concentrated on some aspects that may not have been revealed in the questionnaires. Interviewees were asked to reflect on their main personality traits and whether these could be related in some ways to their high IQ and instrumental in their academic underachievement. Their responses confirmed personality traits,

‘typical’ of high IQ individuals as reported by Jacobsen (1999b), Webb et al, 2005, Daniels and Piechowski (2009) and Webb (2013).

6.3.1 Being ahead of peers when starting school, then gradually falling behind

The first similarity was that all interviewees had a very high IQ score of between 143 and 156, much higher than the cutting off point of 132 for admission to Mensa. The literature showed that the higher the score, the more likely it is that individuals will experience difficulties. Indeed, Hollingworth (1926), Towers* (1987) and Siaud-Facchin (2008) suggest that the ideal IQ score for performing well in the school system is 115-125 and that another 10 to 25 IQ points often makes it difficult for individuals to cope if no special provision is made. The interviewees’ experience may be seen to confirm this.

The second most striking similarity between the ten interviewees was their experiences of education and academic underachievement, regardless of whether they had enjoyed their early school years or not. Indeed, all ten interviewees reported starting school well ahead of their peers in terms of reading and thinking skills, factual knowledge, and breadth of interests but gradually ‘falling behind’ over the years. This also confirms the literature on gifted children (Hollingworth, 1937; Renzulli, 1978; Deslile and Berger, 1990; Lovecky, 1992; Roeper, 2000; Mahoney,

2003; Colangelo et al., 2004; Gross, 2004; Webb, 2014). Two participants felt that this had happened by the time they were ten or eleven years old, the other eight during their secondary school years. With hindsight, they perceived this decline to be attributable to lack of appropriate intellectual stimulation, leading to boredom, disengagement and not 'learning to learn' - all of which eventually resulted in varying degrees of underachievement.

Whilst the above corroborated what had been found in the review of the literature and the results and findings described in Chapters Four and Five, the following recurring themes uncovered during the interviews filled the gaps about the missing elements: the long term effects of academic underachievement on a sample of adults who had discovered their high IQ late in life.

6.3.2 Poor self-concept

Nine of the ten interviewees revealed being conscious that something was 'amiss' and feeling deep down that they were more intelligent than their teachers gave them credit for. However, they could not prove it, even to themselves, until they had passed the Mensa test (long after having left the education system in all cases but one). This had caused them to feel confused about who they were. In turn this had led to a poor self-concept which, they had realised with hindsight, had been caused

by being forced to be someone else for many years. The notion of poor self-concept is indeed one of the characteristics of underachieving gifted children, as suggested by Souza (2002), Silverman (1998) and Souza (2006) and Silverman (2009). Siaud-Facchin* (2008) reports that unidentified gifted children do not understand who they are, feel confused and become wary or unable to reveal their true self. The quotations below seem to indicate that the interviewees did struggle in this respect.

Poor self-concept / confusion about who they were or still are (9 interviewees out of 10)
<i>I don't consider myself gifted, I don't think I was a gifted child. I only did very well until the age of 10 and later as an adult but very badly in the middle bit. I would have done much better at secondary school if I had been gifted. (No 5 - 00:05:49)</i>
<i>I often felt quite stupid as a child. (No 5 - 00:26:23)</i>
<i>I've never really found learning anything very difficult as an adult. Even my Master's was walk in the park. I do not know what happened at school. (No 5 – 00:44:54)</i>
<i>I did not think I was brighter than others but I knew I was different, in a negative way. I wanted to be a normal, part of the team. So, I was pathologically quiet and I chose not to do well at anything because that would put me in the spotlight. I was different but I did not know why and I regretted being different. (No 2 - 00:11:58)</i>
<i>I used to read avidly as a child. I'd probably read at least one book every day sometimes more. Every time I met a word from a foreign language, I would write it down, look up the meaning and then keep little notebooks with all the different words and things like that. I just thought that was what everyone did. (No 3 - 00:34:35)</i>
<i>I just thought everybody was bored; everybody was unhappy; everybody read book a day; everybody wanted to learn foreign languages. So, yeah, I did not realise that I was different. (No 3 - 00:45:47)</i>
<i>I was offered a place at a good university but had no sense whatsoever of having achieved anything. It meant nothing. I did not understand what the fuss was about. When I got there, I thought "What am I doing here?" I never valued qualifications because I did not have to work to get them. It was all very pointless. (No 4 – 00:07:30)</i>
<i>A cousin of mine said "a number of people in the family think you're just too clever by half. They can't understand you. And when you're there they want to walk away because they can't keep up". And I didn't realise that and it made me feel awful because I don't want to appear condescending to people or putting them down. (No 1 - 00.17.36)</i>
<i>I often have to repress my thoughts because I can't share them with anybody. It feels like almost losing the</i>

<i>real me because of constantly having to restrict myself. (No 1 - 00:39:25)</i>
<i>I think I have just finally learned to be me now, at 57. (No 2 - 00:17:03)</i>
<i>I don't think I ever knew myself until I had therapy. (No 2 - 00:53:50)</i>
<i>Knowing at the age of three that Archbishop Makarios was from Cyprus was considered amazing but not when I was 13, 14. I was constantly being told to be quiet, not to be such a 'know all' and not to have opinions. I did not understand why it was wrong to be me. (No 3 - 00:24:25)</i>
<i>I learnt it is not good to say that you belong to Mensa. People think that you feel superior and employers also often have very bad reaction when you mention it. So, my advice is keep quiet about it. Very few people know I am a member of Mensa. I have to hide this part of me. (No 3 - 00:55:03)</i>
<i>I never tell people I'm in Mensa. It's not something people need to know. I guess it's like rich people who keep quiet because they don't know how people will feel towards them. They have an advantage because they can solve problems with money, I have an advantage because I can solve problems with my brain. People don't like you to have advantages. (No 7 – 00:29:58)</i>
<i>Sometimes I have to think twice before I speak and I've had to learn not to appear to be superior. I really don't want to be and have to stop myself from saying things that may be seen as a little too complicated. (No 3 - 00:56:02)</i>
<i>By the time I became aware that people thought I was rather different, I decided to not let it bother me. I am not sure it always worked. (No 4 – 00:27:09)</i>
<i>Whenever I'm at a social gathering, I try to avoid, if possible, talking about something I am knowledgeable about because of all the things I would want to say about it. So, I often have to sort of monitor what I'm saying and restrict myself. (No 4 – 00:54:19)</i>
<i>My therapist knew I was very clever. But it's something she did not really want to talk about as if it was not important. I am not sure I'd agree with this as it probably was part of my problems. (No 5 – 00:20:08)</i>
<i>When I finished my degree with 1st class Honours my tutors suggested I should become a teacher but with my appalling school record I thought it would be ridiculous. I would never have had the confidence because somebody was bound to find me out at some point. (No 7 -00:10:45)</i>
<i>Being barred from university because of my poor 'A' level results led me to believe that I was quite dumb and this stayed with me for 40 years and is probably still there somewhere even though I now have two degrees. (No1 - 00:39:13)</i>
<i>I feel I have wasted my talents and not achieved anything. (No 3 - 00:52:50) (Despite having 2 Master's degrees, several other qualifications and speaking several languages).</i>
<i>Acquiring late academic qualifications has given me a new-found sense of self. I wish I had not gone through all the emotional trauma of my early life and known my real worth much earlier on. My life could have been so different, so much better. Years of deep misery for not knowing who I was.... I waited until the age of 46 to take the Mensa test. It is not until then that I had begun to suspect that I had a level of intelligence that had not previously been recognised. (No 10 - 00:34:23)</i>
<i>I loved school until the age of 11 and was doing very well. But when I moved to the secondary school all this</i>

changed and I was put in the bottom set, even though I had passed the 11+. Nobody ever explained why and no teacher seemed to have any expectations of me so I gradually accepted that this was now my place but it was all very confusing. I thought I should be with the clever children but they did not. I left school at 16 with very little but when I passed the Mensa test at 18, which meant that I was clever after all, I became all confused again. (No 9 - 00:12:11)

At school I just gradually disappeared into the background. I can't imagine a single teacher from my secondary school remembers me. (No 9 - 00:26:03)

I knew I was pretending to be somebody I was not at work and that's hard for 10-12 hours a day. I realised that if I kept doing this I would lose the connection with my inner self. At that point I had some counselling and that made me realise how bad it had been for my well-being to have to hide who I was. (No 9 - 00:39:50)

6.3.3 Not fitting in, leading to low self-esteem, self-doubt or isolation

Interviewees revealed that their experience at school of not fitting in had led to low self-esteem, which had still been felt deep down, even after they had passed the Mensa test. All interviewees mentioned feeling elated when receiving the results of the test but finding it hard to believe them and having felt like an impostor ever since. Indeed, regardless of what they had achieved in later life there was still amongst all interviewees a very strong underlying lack of self-belief, which they attributed to their earlier underachievement. This low self-esteem was perceived by the participants as being a consequence of and closely linked to their poor self-concept.

Six of the interviewees revealed that their academic underachievement had led to a fear of failure which had extended beyond the academic sphere and had, for example, manifested itself in the work place. Whilst they often felt that they could

think of better solutions to problems than colleagues, they were inhibited in voicing them. This, they felt, was in some ways due to remembering what they had experienced in school where they had gradually learnt that it was often better to 'keep quiet'. Poor self-concept, low self-esteem and fear of failure had all contributed to feelings of isolation which they felt have had an impact on their long-term mental well-being.

Not fitting in - leading to low self-esteem, self-doubt or isolation (9 interviewees out of 10)
<i>I knew I was different and I regretted being different. That was very isolating. (No 2 - 00:01:34)</i>
<i>Sometimes people don't understand me when they first meet me and it makes me wonder if there is something wrong with me. (No 2 - 00:19:25)</i>
<i>I'm different from the majority. The general assumption is that it's bad and conformity is deemed to be good. But I have never been able to conform, to fit in the mould. (No 2 - 00:48:15)</i>
<i>My own parents found me rather peculiar. I was a very, very quiet child. You see, it was all going on in my head. I didn't say very much and did not 'fit in'. (No 4 - 00:01:35)</i>
<i>I find it very difficult to trust myself, you know. I still don't really know myself and it makes it hard for me to truly connect with other people. I think that may be why I find intimate relationships difficult. (No 5 - 00:19:12)</i>
<i>I didn't have any problem relating to the opposite sex or other age groups at school. They were just people and I enjoyed meeting with them. But I was never a close friend of anybody's. When I started work I did contracting for a long time and I got very friendly with a lot of people when I was there but it was superficial. They weren't what I would call friends. Real friends who are on the same plane as you are hard to make. (No 1 - 00:34:49)</i>
<i>I was a bright kid and a sensitive kid. I think that if that sensitivity is not nurtured the kid doesn't fit the correct pigeon holes, he picks that up and I think that's what might have happened with me. (No 5- 00:06:36)</i>
<i>I guess that, because on not fitting in at school, I've been trying to make up for lost time and sort of doing the things I've really wanted to do but could not before. Because of that, I've never really had much time for other people. Since I left school and have been able to do what I want I've been too busy pursuing my objectives – the things that matter to me. (No 4 - 00:21:58)</i>
<i>I've always wanted to have a nice relationship with someone I can talk to easily. I obviously loved my ex-wife dearly at the time but there was an imbalance of IQ which I think was part of why we split up. (No 1 - 00:19:11)</i>

<p><i>My present partner is a very nice person but to be honest we don't really connect intellectually. She's constantly saying to me, "What planet are you on? What you talking about?" (No1 - 00:42:55)</i></p>
<p><i>My husband and I met at the Polytechnic as first year students who had not done well enough to get into uni. We clicked instantly and only realised much later that we had similar IQs. We have been very happily married for 36 years. Life could have been so different if we had not found each other. (No 3 - 00:00:32)</i></p>
<p><i>The girlfriend I had at university told friends that she was intimidated by my 'giant mind'. I was not aware of this at the time but maybe it was the real reason for us breaking up. (No 6 - 00:24:00)</i></p>
<p><i>Discovering Mensa was great as it has finally enabled me to meet like-minded people with whom I can connect quickly and easily. As one member put it: "I have finally met my tribe". (No 6 - 00:27:55)</i></p>
<p><i>Boosting my self-esteem was my only motivation for starting an OU course as I had no need of higher qualifications for any commercial or career move. It was purely to prove myself to myself, at the grand old age of 56 and after decades of feeling 'inferior' because of my lack of academic credentials. It did a world of good to my self-esteem. I wish it had happened earlier in my life. (No 1 - 00:12:19)</i></p>
<p><i>There was an intellectual gap between me and my first husband and it is probably the main thing that made us split up. I think he felt threatened. My parents did not want me to marry him because they could this but I couldn't see it at the time. (No 8 -00:41:46)</i></p>
<p><i>I don't really felt that I belong anywhere. I've got a good husband and a place in my family. But it's quite difficult to know where and to what I belong. I don't have a feeling of belonging. This can make me feel lonely at times. (No 8 – 00:57:27)</i></p>
<p><i>I suffer from constant self-doubt. I often think "How did I get through the Mensa test? I mean, the score I was given was quite high. I keep thinking this must have been a fluke, if I did it again I would not pass it now. (No 1 - 00:37:53)</i></p>
<p><i>My wife already had a PhD when we met and, although I was a (mature) student then, we seemed to click instantly – a meeting of similar minds. I had never known this before. (No 6 – 00:15:18)</i></p>
<p><i>I was picked on because I was different. My mother could not understand what was wrong with me. I was referred to some psychologists who did some tests and all I knew at the end of it was that I was declared 'normal'. With what I know now I wonder if they had picked up on my high IQ then. (No 7 - 00:07:12)</i></p>
<p><i>At junior school one teacher asked the class what they wanted to be when they grew up. All the children answered: fireman, hairdresser, policeman, etc.. I said 'happy' and the whole class including the teacher fell about laughing. It was very humiliating and made feel one again that I was different. I have achieved my goal of being happy and I wonder how many of them became what they said they wanted to be. (No 7 – 00:09:15)</i></p>
<p><i>At 13 I had to move from a private school where I was a high achiever to a comprehensive school where I did not fit. I was bullied for being posh, misunderstood by teachers and became very withdrawn. By the time I left school at 16 with 2 O levels, my self-esteem was so low that I believed myself to be unemployable. All of this led, unsurprisingly, to a catastrophically low sense of self-esteem and the belief that I could never achieve anything at all academically. My lack of academic achievement had a profoundly negative effect on my early</i></p>

adult life and, now in my fifties, and despite my PhD, I still suffer from bouts of self-doubt and low confidence in my abilities (No 10 - 00:08:14)

I always thought differently from the pupils around me. I did not fit in the way they wanted me to think. (No 7 – 00:02:08)

They had a small library and during the lunch breaks I'd read books on the planets, the solar system whereas the other kids were outside, fighting or playing football or skipping. They thought I was odd. (No 7 – 00:00:54)

I don't suffer fools easily. So if think someone (other than my young offenders) is stupid I find it difficult to engage with them. I try not to show that but it's not always easy. (No 5 – 00:40:54)

*I am not the norm. I do always feel as though I am on the outside. It's not because I feel better than other people, just different. I have lots of acquaintances but very few people I can really relate to. (No 7 – 00:14:45)
Yet, although I am a loner, I am not lonely. I am comfortable in my own skin. (No 7 - 00:40:48)*

I don't suffer fools gladly. If I think that someone is being stupid, not very sensible, not using their common sense, I'll get a bit annoyed. I am not very tolerant of stupidity. (No 8 – 00:53:10)

Thirty years of being associated with the Royal Air Force and going to parties and coffee morning, I've learned how to make small talk but I still hate it. I can't see the point of it. Why should anyone have to do this to fit in? (No 3 -00:14:28)

6.3.4 A very active mind

Eight interviewees reported 'deep thinking' processes, creativity and a vivid imagination that others often found hard to follow. This isolated them as there weren't many who could understand and share their thoughts and ideas. This had been made more bearable since they had discovered that the reason for this was their high IQ and that there were many others like them amongst Mensans. Up till then, it had made them feel 'odd' and out of step with most of the people they were mixing with. This confirms what Gagné (1993) and Tucker and Hafenstein (1997) posit, that is to say that having a high IQ amounts to having a different thought process and a form of cognitive functioning which is a deviation from the norm.

A very active mind (8 interviewees out of 10)

I have a broad base of knowledge and the ability to connect very germane pieces of information. People joke that they can almost hear the intricate wheels spinning in my head. (No 1 - 00:21:24)

I can think very quickly and I can articulate things very quickly in my mind. I can have a conversation and be 4 or 5 steps ahead. I love discussing things which are quite complicated with somebody who's an expert in that subject and seeing how far I can go. (No 2 - 00:06:57)

Most people can live an entire life just conforming and never thinking about anything with any real depth. I could not do this even if I tried. (No 2 - 00:32:20)

My brain works all the time. I wake up in the night translating German into Spanish or something. I worry a lot and I'm quite imaginative. I love to think about possibilities and futures and difficult situations and things. (No 3 - 00:015:04)

I find it very frustrating to have to keep my mouth shut a lot of the time because people may not be able to follow my train of thoughts. (No 3 - 00:41:41)

I can usually see all possible solutions fairly quickly and work out how to achieve a desired outcome. If things aren't moving on or the conversation isn't stimulating or I can't leave for some reason of politeness or something, I actually find it quite stressful being there. (No 3 - 00:017:52)

My brain needs to have something to do all the time. I need to be active and entertained. (No 3 - 00:48:09)

I would prefer to be a trendsetter rather than a follower. I'd rather be individual. I'm not bothered about what other people think about things. I've always been interested in something that Disraeli said, this may not be an exact quote but it's something like, "Whenever I want to read a book, I write one." That's what I do. I write articles for magazines on Travel, Genealogy, Linguistics and Spain. (No 3 - 00:17:52)

I am able to interpret complex theory and translate it into simple, appealing messages, the subject of some of the 16 books I have written. (No 2 - 00:15:18)

In the same year that I passed the Mensa test, I was on Mastermind, 15 to 1 and on a quiz on radio but these are about knowledge rather than intelligence. I find it frustrating that people do not understand the difference between knowing things and being able to think original thoughts. (No 3 - 00:52:03)

My therapist always used to say "You need to live in your body and your heart and your soul. You intellectualise everything. You live in your head", as if this was a bad thing to do. (No 5 - 00:18:44)

I need a huge breadth of input. Almost anything interests me to a certain extent. My mind does skip about a lot and at the grammar school, you studied subjects in a linear fashion. That's not the way my mind works. I like making connections between things. I like variety. And secondly, I want to know about and

understand things. Not because I want a qualification, but simply, because I want the knowledge. I'm always frustrated by my own ignorance of things because I know how much I do not know yet. (No 4 - 00:17:58)

I used to be rather short and sharp with people who could not reason as quickly as me or who didn't have the same base of knowledge as me to draw on. I've had to learn to be more tolerant. (No 4 – 00:20:19)

I always look at all the possibilities and try to look at all the angles, all the details. This means that I often leave people behind because they can't follow my train of thoughts. (No 7 – 00:23:50)

If I can't see the point then I can't do it, whereas a lot of people are just happy to plod away just because they have been asked to. (No 8 - 00:48:14) I remember as a child not wanting to play 'stupid games' and preferring to go off to do my own things. (No 8 – 00:49:47)

There's so much going on in my head at the same time that I feel I always need to find a way of not wasting time to be able to attend to all my thoughts. (No 8 - 00:50:14)

I get easily bored. I need a lot of mental stimulation all the time. (No 7 - 00:27:41)

The problem is that bright people don't always realise that most other people can't see what they see. (No 7 – 00:34:34)

I am a permanent student. I always want to learn something new, not necessarily to gain qualifications, just to satisfy my thirst for knowledge, to gain new skills. (No 9 – 00:41:48)

6.3.5 Occupations aiming at helping others

All interviewees mentioned that, in some ways, their job involved trying to understand the minds of people and/or helping to improve people's lives.

One is a Youth Justice Practitioner who cares for teenagers who 'have lost their way' and tries to help them find a new path that will hopefully help them do 'something positive with their life'.

Two are further education lecturers, teaching young offenders or students with learning difficulties /special needs and devote their time to helping improve their lives and prospects.

Two are writers and public speakers whose main centres of interest are the psychological processes leading to self-improvement. One is a prolific writer with books translated in 16 languages and the other specialises in coaching people. In their spare time they both volunteer to help disadvantaged children and adults.

Two are (or were) IT consultants/Systems Analysts who said that their job involved 'looking into the minds of the people who write computer programmes' and finding out where they went wrong in order to provide solutions.

One is a hypnotherapist and another a Psychology lecturer and researcher.

From the above it could be surmised, therefore, that the participants' painful experience of early underachievement influenced their choice of career and that they are now, in some ways, helping 'fix' others because of - as several quoted - having been 'broken' by the education system themselves. This could be seen as a positive consequence, for society at least, of their negatives experiences.

<p>In occupations aiming at helping other people (8 interviewees out of 10)</p>
<p><i>I originally studied psychology to help myself, to help me understand how the mind works but now I am more interested in helping other people. It is really rewarding to help people feel better about themselves. If I had not had extensive therapy, I would not be doing what I am doing now. (No 10 - 00:45:34)</i></p>
<p><i>I write case studies of people who are homeless. I interviewed a guy who basically had all the same kind of abusive childhood that I had. It made me realise how little it takes to flip from being successful like me or unsuccessful like him and wanting to find ways of helping people overcome their circumstances. (No 2 - 00:34:29)</i></p>
<p><i>(My husband and) I enjoy helping other people along whenever we can. Of course, sometimes helping is seen as interfering. So that can be a bit of a problem. Sometimes you can see how to help other people with something but they don't necessarily want to be helped. (No 3 00:43:04)</i></p>
<p><i>I'm teaching elementary photographic techniques to people with learning difficulties. I am intrigued by their thought processes, how they see the world, how they are processing data. This led me to learn about cognitive neuro science to find better ways of helping them. (No 4 - 00:35:55)</i></p>
<p><i>I work with young offenders, kids who have generally low intelligence and are from low social economic backgrounds, and have had real trauma in their lives. It's a great job. (No 5 - 00:05:49)</i></p>
<p><i>Once I finished my BA Psychology I did a one year Masters in Forensic/ Criminal Psychology. Once I'd done that then I started looking around for jobs in prisons and youth offending teams because it seemed a worthwhile job and I got the job that I'm doing now. (No 5 – 00:15:18)</i></p>
<p><i>A boy I'm working with now very closely, he's really going to struggle all his life this boy. He's got serious learning disabilities. I would say very low cognitive functioning. He's 15, probably performs at the age of an 8, 9, 10-year old. But you just have to, you know, be patient with him. He can't help it. That's what my job is about. (No 5 - 00:25:14)</i></p>
<p><i>In my current job (Youth Justice Practitioner) if I earned another 10 grand a year I think I'd be the happiest man on earth because I feel that what I am doing is really worthwhile. (No 5 – 00:48:22)</i></p>
<p><i>One of the best ways to stop kids offending is finding them something useful to do so we have to keep them in school, send them to college, and help them get a job. But those things are difficult for kids with criminal records and low cognitive functioning, it's even more difficult but so important. I love it. I love it. I love the job. (No 5 – 00:53:49)</i></p>
<p><i>I suppose the work I do now is around helping charities to become self-sufficient. And they're usually engaged in helping people who are disadvantaged, because they kind of don't fit in, they're kind of excluded. I set up a company based on a concept of a human library where you go and borrow a person like a book. You go to a library. And you borrow somebody who's schizophrenic, somebody who's gay, somebody who's disabled, whatever. You borrow them for ½ hour or an hour or half a day and you have a conversation with that person in that kind of, a safe environment for both of you. Both of you can confront prejudices and discuss concerns.</i></p>

<i>It is a really positive experience for both. (No 2 - 00:36:49)</i>
<i>I teach young offenders on probation. They've got the doors of the prison looming over them and they are quite motivated to learn. And it is very rewarding to turn them around... (No 8 – 00:09:36)</i>
<i>One of the reasons I've been keen to help you, Anne, is that when I started my degrees in later life, people were really helpful to me and I thought, people in your position should be helped as much as possible so I was really very keen to participate. I'm really interested in what you will find out because hopefully it will help people like me. (No1 - 1:00:53)</i>
<i>I want to give back, to help the offenders I teach. I know that if they had the confidence, which sometimes comes from just getting one very basic qualification and realising that someone believes in them, they could have a better life. That's what it takes for some of them. If they started offending really young, everybody's always treated them as being a bad person. I don't always know what they've done. I don't particularly want to. Sometimes if I work with them for long enough, it will come out. But most of them, I have no idea. And I don't want to know. I think that helps them. Because I'm not judging them for what they did. You're here, I'm here. We here to learn. That's what I do, I teach. So, let's get on with it. It's just an opportunity to give them something that I got (education) and didn't appreciate at that time. (No 8 - 00:54:00)</i>
<i>I do have this sort of eclectic collection of wonderfully strange people that I kind of mix with it. I've got two good friends who have changed gender - one after I knew her as a him. (No 2 - 00:35:24) He/she is a transgender, Jewish, astronomer, completely bizarre person. But we've had an ongoing dialogue over a long period of time about being bright and not fitting into the world. Some people are fascinating and yet nobody is interested in what they have to say. I want to support them. (No2 - 00:45:20)</i>
<i>I am interested in people, in listening to what they have to say, in helping them. I am not interested in talking about me and wanting them to be impressed by me. (No 9 - 00:42:11)</i>
<i>My job as a systems analyst involves looking into the minds of people who devise computer programmes and understand where they went wrong so that I can make the programmes better. I am a bit like a psychologist for computers. (No 7 00:08:03)</i>
<i>I coach people and love it when I meet people in their twenties who are convinced they can't go back to education because of their past experiences and I manage to make them change their mind. It is very rewarding to be able to help people change their life for the better. And if they then become excited about the learning process that's even better! (No 9 - 00:54:58)</i>

6.3.6 Values and beliefs

Eight out of ten interviewees reported finding it difficult to cope with injustice and cruelty. Three mentioned always supporting the 'underdog' and three had left a well-

paid, high status job, as they could not reconcile themselves with the unethical practices of the organisations for which they were working. As suggested in Chapter Seven, having more high IQ individuals with a great sense of fairness and integrity in positions that may affect the life of thousands of millions could only be good for society.

Values and beliefs: Cannot cope with injustice, cruelty, and unethical practices. Like to defend the case of the 'underdog'. Value integrity above all. (8 interviewees out of 10)

In the job that I did before I used to react very strongly to the hypocrisy of a lot of what we were doing. (No 5 – 00:43:56)

I have intense reactions to iniquity, cruelty, falsehood, political correctness. These are the things that really get my blood pressure up. Corruption and inequality, injustice, unfairness, you know, nepotism ... oh, those things they really do annoy me. I mean, I am notorious for writing letters to MPs, letters to newspapers or even to the Prime Minister. (No 4 - 00:45:15)

I think deep down I am a rebel. I do get angry at social injustice and I love getting in amongst all the stuff other people don't go near. (No 2 - 00: 34: 12)

I feel very strongly about events in the news where people are cruel to animals or to other people or to the mentally disadvantaged. I feel very strongly about that sort of thing. My husband does too. He gets quite upset sometimes when we watch TV, particularly if people behave badly towards people with learning disabilities or in some third world countries where people just have got no chance and they don't know what external forces are affecting them and things. So, we both feel very strongly about that sort of thing. (No 3 - 00:43:04)

I got bored and cynical about the job I was doing before. I was a very well-paid analytical chemist for a big pharmaceutical company. They were a good company but the overregulation of the industry by the American Food and Drug Administration and the way our particular plant was run made me very disgruntled. I felt that we were being asked to do things which weren't scientific, weren't sensible or ethical and found myself arguing all the time with my bosses about some of things that we were having to do. And I just reflected one day that all this actually made me very unhappy and unfulfilled in my job. So I left. (No 5 – 00:14:14)

I was working for xxxxx and I'd made a big impression. I was then the Quality Assurance Manager for the whole of the Southeast Region. I fought many battles as there was so much corruption going on there, for instance people deliberately promoting the least able because they were not a threat. All sorts. And it got so bad that the staff turnover at one point was about 52%. So something had to be done. I started to

revolutionise the way the place worked by making things transparent instead of everything being secret and going under the carpet. I instituted a newsletter and I wrote one particular article that was really hard-hitting about the Quality Management System I was instituting called 'from KGB to QMS'. That got me noticed but despite a few improvements, they didn't seem to do anything I wanted to do. The place got worse and worse, so I left. (No 6 - 00:18:10)

I hate people being treated badly, people jumping in with all guns blazing before they understand what's going on, inequalities and that kind of things. I particularly hate cruelty and hidden agendas. I have an intense reaction to them. Not physical violence but I do get very upset. (No 1 - 00:29:20)

I hate networking meetings where everybody is only after one thing: what others can do for them. I can't stand the hypocrisy and the pretence they actually care about you. It is all so false. I have to go to those but I hate it. For me there is to be sincerity and trust for a business relationship to be worthwhile. If there is clash in personal values I find it very difficult to 'connect'. (No 9 - 00:35:28)

What I had to go through at school, the bullying, the teachers' lack of willingness to help me, my aunt's constant put downs and my intense unhappiness have made me hyper-sensitive to cruelty and unfairness. There is nothing that gives me greater satisfaction than helping the 'underdog'. (No 10 - 00 43:18)

6.3.7 Life choices

Eight out of ten interviewees mentioned that they had a happy marriage or long-term relationship (two after a failed first marriage – blamed partly on intellectual mismatch) and that their partner - whom they described as 'also very bright' - was their 'anchor' and the only person that really understood them. In half the cases, this was the person that had 'saved' them and enabled them to 'turn their life around'. One participant was single and childless, by choice. One was recently widowed (after a 30-year happy marriage).

However, in addition to the interviewee who was single and childless by choice, six of the nine who were or had been in long-term happy relationships had also chosen

not have any children and one had only just started to think about it in her early forties. This means that 7 out of 10 were childless. Although statistics could not be found, one would assume that this represents a higher proportion than the general 'happily married' population of the current 40-70 age group. Several said that they were fearful they might inflict on their own child the miserable childhood they had had as they would not be able to provide special/private education for them.

This raises the issue of the wider impact on society of not supporting high IQ children. A significant number of studies of monozygotic twins who were reared apart have shown that, when tested in adulthood, they had the same IQ score regardless of what their environmental upbringing had been (Plomin et al., 1994; 2009, Devlin et al., 1997; Plomin and Haworth, 2009; Davies et al., 2011). They may not necessarily have reached the same level of academic qualifications since environmental factors such as parental support can influence academic achievement (Cutrona et al., 1994; Bouchard, 1998; Freeman, 2013) but they had an identical IQ score.

If we deduct from this that IQ is mostly genetic, just as the colour of ones' eyes or hair, then one can wonder what will happen to society if high IQ individuals do not have children. One can speculate that the pool of high IQ individuals could

decrease over time and, with it, the pool of potential scientists, researchers, innovators, visionaries etc., all of whom could contribute positively to society.

The three respondents who had children said that they had ensured that they were privately educated and that they had enjoyed their education. They were proud that they had all done very well academically (Master's degrees or PhD from well-reputed universities). This, of course, raises the question of provision of 'good' education for all, not just those who can afford private education and gives some indication as how the problem may be perpetuated. If the very people who value education and want to ensure a good experience for their children opt for private education, there will be fewer parents to help defend and improve the state system.

Below are a few of the comments made by interviewees on this subject.

No children because of fear of what would happen to them (7 interviewees out of 10).

If they had children, they were privately educated (3 interviewees out of 10).

I thought I wanted children to go with the semi-detached and the job but when I thought about it, I thought, "Why? Why do I really want children?" It's one thing people don't usually question. People ask you why you don't want children, never why you do. When I got together with my wife we obviously discussed it and it just gradually dawned on us that neither of us really wanted children because it would restrict our freedom. However, it is quite possible that there were other unspoken reasons – both of us were late high academic achievers by then but neither of us had particularly fond memories of our childhood. (No 6 - 00:12:04)

If I'd had children, I would have liked them to have the breadth of experience I like but I knew they would not be able to, as it were, break out. When I taught at xxxx College, we were almost next door to xxxx school. That's a very expensive public school. They had huge resources, you know, absolutely huge resources. I knew I could never afford a school like this if I had children and they would have to go through the same hell as me. If they had been highly intelligent, they would have had the same problems as me. (No 4 - 01:00:06)

My mother showed more affection towards my younger sister who was not as clever as me but who liked playing tennis and cooking and things. I resented this a lot and felt that being a clever child was a bad thing. My sister resented me for being 'the clever one'. Maybe that's what put me off having children. (No 3 - 00:38:55).

I was unaware of my son's brightness for a long time. It is through talking to a friend of mine that I found out I really needed to monitor and nurture it. She had a child at the other end of the spectrum and she said – we both got the same problem but at different ends. So I looked after him academically. He went to a very good private school then to Oxford and got himself a Master's degree there. His older sister is also very capable but her ability was not recognised and she went to a local comprehensive school. She has done well too but it was probably much harder for her as she did not get the same opportunities. (No 1 - 00:02:35)

I actually agree with selective school and selective education. (No 1 - 55:02:35)

We've kind of...we paid for them to go to a private school. They're fairly bright and it was about giving them the chance to do better than me. Part of my experience in the state system is that it was really crap. It was about having a self-selecting group with kids who are more likely to be interested. And with the fact that if you're paying a school, then there's an expectation that they're going to be more... they're being paid by the parents, there's more chance that they're going to respond and do something than the schools being paid by the State. (No 2 - 00:12:24)

I did not want to have children. The standard answer is that because they're too expensive but the truth is I would not want to inflict me on them. I could not afford private schools and, because of this, they would have to go through the same horrible childhood as mine. That would not be fair. Also, because of being a late achiever I still haven't found my own place in the world. How would I be able to guide a child? (No 7 - 00:16:42)

People are not stupid, they put their kids in private schools for a reason. They pay the huge fees because they want the best for their kids. They want good teachers and small classes where the teacher knows the kids. (No 7 - 00:50:49)

In view of my own very positive experience until the age of 13 in a lovely private school followed by my disastrous experience in the state system, there was no way I could have sent my children to the local comprehensive. (No 10 - 00:18:14)

When I look back at it, I know it was a good decision not to have children. They would have stressed me beyond belief. There is an article in the latest Mensa magazine bemoaning the fact that intelligent women are not breeding and propagating the good genes. I know it sounds like a terrible middle-class comment but it seems true that the lower classes have lots of children that they don't look after properly and those who could look after them properly don't have them. (No 8 - 00:41:33)

The final part of the interview was meant to be spent discussing the feasibility of an Open University style of education in schools for gifted children. Unfortunately,

whereas for the larger sample 50% of respondents had obtained their first undergraduate degree via the Open University, amongst the interviewees, only one out of ten had done so. It was therefore not as useful a discussion as was hoped, although several who had studied part-time and by distance learning, albeit not with the Open University, felt that this type of system in schools may be feasible, depending on how it was implemented.

6.3.8 Mental well-being issues

Eight out of the ten interviewees had not mentioned these factors in their questionnaires and yet, when asked about this in the interview, they all reported feeling that there was a connection between their unacknowledged high IQ, their academic underachievement and their mental well-being, as suggested by Bost (2011), Guénoilé et al., (2013) and Webb (2013).

In addition, although the circumstances that had led them to seek medical help differed, in all cases their feeling of not fitting in had led them to being confused about their identity and their true persona. This confirms research by Lovecky (1992) and Siaud-Facchin* (2002) about the experiences of gifted children not fitting in the classroom and of Falck (2013) about those of high IQ adults not fitting in the work place.

Impact of undiscovered high IQ and underachievement on mental well-being.

(8 interviewees out of 10)

I think I've dealt with the impostor bit through 3 years of psychotherapy. But the self-doubt is always there. Sometimes it's even self-loathing. (No 2 - 00:50:57)

I was introduced to psychotherapy at the age of 49. I was trying to prove a point by over-achieving professionally, possibly to make up for my failings at school, and was very close to a breakdown. The psychotherapy lasted 3 years and it stopped me from self-destructing. I did 6 more months of the same last year but this time it was to help me reach greater levels of self-understanding. That was much more about making sure that I knew myself, understood myself, and could live with myself. Understanding that some of my problems stemmed from my high IQ was a great relief. (No 2 - 00:53:16)

I don't think I ever knew myself until I had therapy. Had I understood earlier where my problems might come from I think I would have led a happier life a lot sooner. (No 2 - 00:53:50)

I took the Mensa test when I was at a low point in my life and felt worthless. Although it was not diagnosed as such at the time, maybe because there was a big stigma attached to it then, I probably suffered from depression. (No 3 - 00:56:48)

I feel that if I had had more help at school I wouldn't have been so miserable and unhappy for so long. (No 3 - 00:12:43)

I was not shy, under-confident and introverted when I was very young, but I gradually became so as I got older. This caused me to suffer from stress and over-anxiety and I was quite badly affected by Obsessive Compulsive Disorder in my teens. (No 3 - 00:13:51)

I guess that I am now addicted to studying and getting qualifications. I am a 'learning and studying junkie' and never stop trying to stimulate my brain. (No 3 - 00:47:49)

In the mid to late 1990's I had what I would call a mid-life crisis where I started looking at my life and my relationships et cetera. I had always considered myself to be sort of generally a happy soul but, you know, I wasn't happy. I was drinking a lot and I knew that there was something wrong. So to cut a long story short, I went into therapy, Jungian Psychotherapy which was a psychodynamic kind of psychotherapy. This is what led me to studying for a BA Psychology. (No 5 - 00:15:18)

I was a regular heavy drinker but I've now been sober for five years. (No 5 - 00:44:54)

My therapist knew I was very clever. But it's something she did not really want to talk about as if it was not important. I am not sure I'd agree with this as I think now that it probably was a big part of my problems. (No 5 - 00:20:08)

My low achievement at school engendered a fear of failure that lasted many years. It took a huge amount of courage for me to return to education after my unhappy experiences. I think that if had experienced any more failure, I would have topped myself. (No 7 - 00:15:18)

You often need a crisis to change your life. Surviving a serious illness such as a nervous breakdown in my forties somehow gave me the strength to cope with challenges thereafter. It forced a career change which has led to what I do now (teaching life-skills, mostly to disadvantaged people) and which I love. Maybe I would not be able to do this if I had not had many unhappy experiences when I was younger. (No 8 - 00:15:31)

At the age of 40, following three years of therapy, I began to foster a tentative belief that I might be able to undertake a psychology degree. The therapy gave me a sense of self-esteem, which led to my applying for a university place. Once I began my degree I felt a mounting sense of my own academic capability and this grew as I progressed through my degree with the help of psychotherapist who never failed to remind me that I could do it. I did graduate with a First, was offered tutoring and marking work by the university where I studied, and subsequently won a grant for a fully funded MSc/PhD at another university. This further increased my sense of self-esteem and led me to study for a PhD. But I still feel that, because of what happened at my secondary school, I wasted 30 years of my life. (No 10 - 00:19: 25)

At that point I had some counselling and that made me realise how bad it had been for my well-being to have to hide who I was. (No 9 - 00:39:50)

It took me several years of psychotherapy to overcome the sense of worthlessness I experienced as a result of my traumatic experiences of school. There are still times now when I have a great fear of failure. (No 10 - 00:08:05)

Years of therapeutic intervention have enabled me to deal with the issues in my early life. However, I still feel desperately angry with the teachers who wrote me off as a failure and never once had any faith in me, nor stepped in to address the bullying that went on right in front of them. (No 10 – 00:16:43)

I was being bullied by a boss who, I realise now, basically resented the fact that I could work out things much better and faster than him. It was the most miserable time I've ever spent at a place of work. I was very close to a nervous breakdown so I decided to walk away from the job, which is something I'd never done before. I felt like a failure for not being able to fight back but I would have become very ill if I had not walked away. (No 1 - 00:17:36)

6.4 Significance of the findings

The data collected in the questionnaires and during the interviews being so extensive, it was felt that the best way to illustrate the long term negative effects of academic underachievement as expressed by the participants was to draw tables highlighting the salient points, as summarised below in figures 30 and 31.

	Long-term effects on SELF of delayed identification of IQ and academic underachievement
Problematic self-concept	Confusion about identity as forced to be someone else for many years, with feelings of 'not fitting in'.
Isolation	Highly developed mental processes and nobody to share thoughts and interests with.
Low self-esteem	Always doubting self. Still unable to believe IQ score because of past experiences and years of poor self-belief.
Mental health problems	Potential link between lack of intellectual stimulation and negative experiences in childhood and poor mental health in adulthood.
Fear of failure	Past negative educational experiences and low self-esteem resulting in deeply engrained and inhibiting fear of failure.
Distrust of and disdain for authority figures and 'unfair' practices	Seen as the result of poor treatment by teachers 'who should have known better'.
Fear of conformity (even if only mental)	Based on past negative experiences of being forced to be someone they were not, making it difficult to 'fit in'.
Negative economic impact	'Wasted' years: very significant loss of earnings with long-term economic consequences - difficulty of catching up professionally with peers/ difficulty of starting a brand new career in one's thirties, forties or fifties.

Figure 30: Long-term Negative Effects on SELF of Delayed Identification of IQ

	Long-term and negative effects for SOCIETY of delayed identification of IQ and academic underachievement
Loss of great potential from individuals who possess:	<ul style="list-style-type: none"> • originality of thought; • a lot of mental energy and intensity; • great intellectual curiosity; • interest and competence in a wide range of topics/ areas; • ability to see the bigger picture and make connections between disparate subjects; • high levels of creativity; • love of challenges; • a strong desire to promote ethical behaviours and a fairer society; • empathy for and the ability to help others.
Unrealised potential due to poor early academic performance	Low or no academic qualifications mean fewer scientists, researchers, academics, innovators, visionaries etc. contributing to the promotion of a better society, on which every member of society's quality of life depends.
Mental health costs	Treating individuals suffering from poor mental health and consequent loss of productivity is very expensive.
Economic costs	The less individuals earn, the less they can contribute to society in terms of taxes and National Insurance, for example. The more unproductive they are the more they also cost society in terms of the financial help they will need to receive.
Cost of life choices	Making the conscious decision not to have children because of their own poor experience of childhood means fewer high IQ individuals to enrich society in future. Those who do have children opting to have them privately educated perpetuates the inequalities of education provision between the public and private sectors.

**Figure 31: Long-term and Negative Effects for SOCIETY
of Delayed Identification of IQ and Academic Achievement**

6.5 Conclusion

This chapter provided a brief analysis of the extensive data gathered during one-to-one interviews carried out with ten participants who had underachieved at school (seven of them leaving at the age of 16 with few qualifications) and who had returned to education in adulthood. The qualifications they had obtained second time around ranged from a Higher National Diploma to a Doctorate.

The one-to-one interviews made it possible to ‘personalise’ what had been highlighted in the Literature Review such as the participants’ experiences of school and the wide-ranging consequences of not being aware of their high IQ until adulthood and of their academic underachievement. This was presented in the form of a table making it possible to compare either participants with each other or to gain an overall impression of each of them. It was then complemented with extracts from the interviews which were classified thematically.

This allowed comparisons to be made between individuals which highlighted differences in terms of the participants’ backgrounds and types of school attended, for example. It also uncovered many commonalities in terms of the long term effects of their experiences of education and academic

underachievement on their mental well-being. Common personality traits, beliefs and values were revealed, some of which confirming what had been revealed in the Literature Review, others adding to the existing knowledge.

The data gathered made it possible to identify themes, to look at the 'bigger picture' and to draw, from an admittedly small sample, some tentative conclusions as to the long term effects of the late discovery of their high IQ and of their underachievement, not only for the individuals concerned but also society.

These, illustrated in figures 30 and 31, stress the severity of these negative long term effects and the reasons why attention must be given to the potential problems encountered by high IQ individuals when their educational needs are not catered for.

These are discussed in greater depth in Chapter Seven.

CHAPTER 7

Discussion and lessons learnt

7 DISCUSSION AND LESSONS LEARNT

7.1 Introduction

Chapters Four, Five and Six formed the basis for answering the research questions which were as follows:

Firstly, what do adults who have a high IQ and have underachieved academically perceive the causes of their underachievement to be? Do their perceptions match what was highlighted in the Literature Review?

Secondly, in what ways has their life trajectory been influenced by their early academic underachievement? As there appears to have been little research so far on this topic could the results and findings from this study help fill a gap in the literature?

Thirdly, what lessons could be learned from the participants' experience that may help educators and policy-makers find strategies to prevent academic underachievement in high IQ individuals?

The three previous chapters presented the analysis of the results of two surveys and the findings from ten interviews. These confirmed many of the aspects

discussed in the critical review of the literature and demonstrated that decades of research in the fields of giftedness and academic underachievement have led to a very good understanding of the problems and solutions associated with this phenomenon. Yet, it appears that there are still high IQ individuals who perform much below their cognitive ability in the school system.

The results and findings also uncovered that, in the majority of cases, this underachievement had been a source of distress for the individuals concerned. Furthermore, the long-term repercussions of this early underachievement had been far reaching and mostly negative, even when academic underachievement had been reversed in adult life – neither phenomenon being acknowledged in the literature.

This penultimate chapter has four aims: firstly, to discuss further the respondents' views and corresponding literature as to the perceived causes of 'gifted underachievement' - in terms of the barriers there may be to solving this problem; secondly, to explain the issues associated with the reversal of academic underachievement in adulthood; thirdly, to highlight the reasons why it is very important to raise awareness amongst educators, policy-makers and government agencies of the long-term effects of early academic achievement on both the life of high IQ adults and on society; finally, a few suggestions are made as to how underachievement of gifted children could be prevented at relatively low cost, harnessing the power of independent, on line learning.

7.2 Further perceptions of the causes of underachievement in high IQ children

Thapar et al., (2011) posit that disabilities like attention deficit disorder and dyslexia, that are known to affect the learning process, are believed to be genetic, even though their causes are not yet fully understood. Currently, no one is sure of how these conditions can be prevented or cured (Peterson and Pennington, 2012). Yet, when identified, they are commonly accommodated under the 'special educational needs' provision in schools and additional support and resources are usually provided to help children who suffer from them.

Similarly, a high IQ is believed to be genetic (Pyryt, 1996; Plomin and Haworth, 2009; Haworth and Plomin, 2010; Davies et al., 2011) and has been identified in the literature as posing problems with the learning process if environmental factors are not adequate (Cutrona et al., 1994; Colangelo et al., 2004; Khan, 2005; Ali et al., 2012; Freeman, 2013; Webb, 2014). As well as the causes of the academic underachievement of high IQ children having been well documented for decades, so have the cures and measures needed to prevent it (Baynur and Patterson, 1960; Rimm*, 1986; Baum et al., 1995. Reis, 2000; Adda* and Catrou*, 2003; Gross, 2004; Berger* and Francequin**, 2005; Stoeger, 2008; Webb, 2014).

Yet, the data gathered so far for this study both in the literature and the questionnaires and interviews suggest that the special needs of some high IQ

children have historically often not been catered for in schools and are still frequently not catered for. The analysis of these data has led to the conclusion that there are barriers surrounding the implementation of the measures that would help high IQ children in schools. These barriers to providing additional support for high IQ children, as demonstrated in the literature and the data collected, are discussed in the first part of this chapter.

7.2.1 Reluctance to acknowledge that high IQ individuals have special educational needs

Whilst it is often controversial amongst educators to consider IQ tests as a way of assessing a person's scholastic aptitude or intelligence (Gardner, 1993; Collins*, 1998; Gagné, 1999; Duckworth and Seligman, 2005; Lucas and Caxton, 2010; Gardner, 2011), these tests have been used commonly and successfully by American Ivy Leagues universities for nearly a century as a way of predicting high academic potential (Stanovich, 2009). The Universities of Oxford and Cambridge in the UK are also increasingly making use of IQ type tests to select applicants as these tests are felt to be a more reliable measure of the good thinking skills required for advanced academic studies than 'A' level results or many foreign qualifications (Mellanby et al., 2009; Matthews*, 2014). In addition, according to Pearson (2011), Cognitive Abilities Tests (which are similar to the Wechsler test and are known as CATs) are routinely used in England in order to test general ability and stream students overall.

Therefore, even though the concept of IQ testing remains controversial in education circles, there seems to be a tacit acknowledgement that there are varying levels of ability in any school children or university student population and that these levels can be determined by IQ-Type tests.

In any case, whether or not one believes that an IQ score is a true measure of intelligence or a good predictor of academic attainment, there is no denying that a very high IQ represents a deviation from the norm. According to Siaud-Facchin* (2008) and as already mentioned, it is this deviation from the norm that can lead to great academic achievement or great academic underachievement, the difference between the two usually being the result of differing environmental factors, mostly related to education provision.

However, there could be a semantic problem associated with the terms norm and normal. Both of these somehow seem to have a positive connotation, a sense of what is 'right'. By contrast, the words deviation/deviant seem to imply some negative notion, a notion of something 'wrong'.

Yet, what the norm represents is simply the average and the deviation a departure from the average. If something is 'below average' it tends to be deemed negative and if it is 'above average', it tends to be deemed positive.

The perception that a low IQ can make academic achievement difficult is therefore not particularly controversial. Individuals whose IQ is low are seen as having less than what is required to function 'normally' and, therefore, as needing extra help to reach an average level of academic attainment, whenever possible. By contrast, the perception that there may be something 'wrong' with having a high IQ may be difficult to accept, especially in the context of academic attainment. Those with a high IQ may be perceived as having more than what is needed to function 'normally' and, therefore, not deserving of extra help. In extreme instances it could even seem almost as though, in order to establish normality and equality within the classroom, something should be taken away from high IQ individuals rather than added. Examples of this are provided by participants in the study as mentioned in 7.2.8 (pupils deprived from public acknowledgement of good results so as not to make other pupils feel bad).

This notion of perceived deficit vs. excess could explain why there is some reluctance to accept that high IQ individuals have special educational needs. This reluctance in turn could represent a barrier when deciding whether high IQ individuals 'deserve' to receive special attention and extra support, especially when government funding for special educational needs is limited.

The following comment from participant 6 in her first questionnaire illustrates this to some extent:

“It seems to me that people must have been aware that I was unusually clever at a young age. My mother wrote in my Baby Book that at the age of eighteen months I could sing songs and nursery rhymes to the correct tune; repeat any word; say full sentences and count to twelve. My ‘remarkable memory’ was noted at the age of two. Why didn’t somebody do something to help me when they saw that I was completely bored at school?”

A substantial number of the participants in the study reported that they felt a great deal more had been achieved by the UK education system legislation to help bridge the gap for individuals who have an IQ score below average and/or other recognised learning difficulties and disabilities than for the 2.2% of the population that has an IQ superior to 132 on the Wechsler scale. A brief assessment of the history of the legislation for Special Educational Needs and Disability in the UK tends to confirm this (Hodkinson and Vickerman, 2009).

In theory, all UK citizens have the same rights to public services for their children and this includes the full range of educational services. If their high IQ works to their disadvantage, one can argue that gifted children should have the same rights as other disadvantaged children to access public resources. Indeed, not catering for

their special needs could be said to be depriving them of receiving the type of education they need and deserve. As such, not catering for them because of their high ability could be seen as an equal opportunities issue.

7.2.2 High IQ : the invisible learning difficulty

Whereas it is relatively easy to identify a child who has a physical disability or behavioural problems or whose learning is impaired by dyspraxia, for example, it may be more difficult for the untrained teacher to identify a gifted child whose performance is poor or average. One could almost compare the gifted child's predicament to a condition like high blood pressure, sometimes referred to as the 'silent killer' because of its absence of obvious symptoms in the early stages of the condition. When high blood pressure is detected, usually through a routine test, and treated, the likelihood of stroke is much reduced. One could argue that if a child's high IQ were to be detected early and catered for, perhaps underachievement would also be less likely. In both cases prevention may be much better than cure.

Just like treating high blood pressure early is a lot more effective and much cheaper than supporting an individual who has had a stroke, catering for a gifted child's needs is likely to be more effective and a lot less costly for society in the long run than ignoring her/his needs in childhood or adolescence.

7.2.2.1 Non identification of high IQ by teachers

From what the surveys and interviews revealed, one of the first reasons for their underachievement seems to be that high IQ children were very often not identified as such by teachers. This was especially likely if their performance was poor, average or even just good. It would seem that, even today, most teacher training programmes contain little information about gifted children and, when they do, giftedness tends to be equated with high performance (Richert et al., 1982; Van Tassel-Baska, 2000; Heller, 2004; Stoeger, 2006). Yet, it is in the early stages of his/her school career that a high IQ child needs to be identified. Considering that, if one knows how to spot them, signs that a child has a high IQ are easily recognisable from as early as two or three years of age (Richert et al., 1982; Heller, 2004; Stoeger, 2006), one can wonder why early years and primary school teachers are not systematically trained to identify such children (Mathers et al., 2014). Indeed, the later identification of high IQ occurs and the later special provision is made, the more difficult it is for problems to be solved (Stoeger, 2006; Koshy, 2009). A report published in January 2014 by Oxford University for the Sutton Trust (Mathers et al., 2014) highlights the weaknesses of the current provision for Early Years education in the UK. It states that what happens in the first five years of a child's life is vitally important and that good nursery provision, with well trained and skilled staff is crucial at this stage of a child's development. It then carries on to highlight how inadequate

early years provision currently is in the UK and how what is crucially needed is a better trained early years workforce. However, the aim of the report was mostly to highlight ways of improving social mobility and to close the gap between the most and least socio-economically disadvantaged children, rather than making provision for the more academically able.

In the case of the participants in this study, late identification of high IQ had very seriously negative repercussions on their lives. Most referred to the late discovery of their high IQ as a watershed, whether or not they had reversed their academic underachievement later in adulthood. Furthermore, most felt that their life trajectory could have been very different and a great deal more rewarding if their high IQ had been discovered much earlier.

7.2.2.2 Non identification of high IQ by parents

In addition, as there seems to be a strong genetic element in IQ scores (Devlin et al., 1997; Deary, 2000; Deary et al., 2007; Haworth and Plomin, 2010), it would seem that parents who themselves have a high IQ but are unaware of it may not identify it their progeny since they function on the same intellectual level. Indeed, many parents discover their high IQ as a result of their child's being discovered (Siaud-Facchin*, 2008). If parents are unaware of their own high IQ but have been successful academically, they may be very frustrated with their son or daughter who

seems intelligent but underachieving at school. They may realise that something is wrong but may blame it on the child – especially if they are repeatedly told by teachers that their offspring's poor performance is due to being 'lazy' (Freeman, 2013).

If, on the other hand, they were not successful academically themselves, parents may equate the child's difficulties to their own experience of education and just see it as a normal pattern that cannot be changed, thus perpetuating the cycle of 'gifted underachievement'. Indeed, five interviewees mentioned that they suspected one of their parents was extremely bright without having had the chance to formally prove it.

Whatever the circumstances, unidentified, high IQ children are unlikely to receive special attention or, rather, they may be at the receiving end of frequent negative attention. Being often scolded for not working hard enough, when what they are asked to do is so below their level of ability that it does not make sense, becomes extremely demotivating. This can lead to gradually increasing levels of underachievement as described by participants and in the literature (Ruf*, 1999; Hargrove, 2010).

7.2.3 High IQ synonym with privilege

Several participants felt that catering for the additional needs of high IQ individuals could be seen by others as a further privilege for individuals who are perceived to already have an advantage. Indeed, compared with many other disabled or disadvantaged individuals, high IQ individuals do seem privileged. This could be a reason why teachers are reluctant to provide extra help for them.

Funds originally allocated to the Gifted and Talented Programme set up in 2002 and cancelled in 2012 (see 7.4.3), being diverted to fund university places for socio-economically disadvantaged young people, illustrates somewhat how priorities for funding can quickly change depending on the political agenda. Fear of promoting elitism can be a driving force against providing support for high IQ children (Colangelo et al., 2004; Conway, 2008).

As participant 55 put it:

"I was identified by my head teacher at the age of nine as a gifted child, but nothing was done about it, as if being clever was an advantage and therefore did not need special treatment. It does!"

Smithers and Robinson (2012) claim that some schools refused to participate in the Gifted and Talented programme as they felt that singling out academic excellence

could be viewed as a form of elitism which may be seen by many as politically incorrect.

7.2.4 Fear of labelling

As Freeman (2005) suggests, teachers are not always keen to assess young children, because of concerns about premature labelling issues.

Some participants reported that teachers sometimes did acknowledge the different levels of abilities represented by the various streams determined by Cognitive Abilities Tests (CATs) but were reluctant to openly label children. They may have felt that labelling a child as 'very clever' could be as damaging as labelling a child as having 'low ability'. It can indeed be damaging to tell a child s/he is very clever if one does not provide them with a curriculum adapted to this cleverness since their superior ability may then just encourage them to rest on their laurels and get by with minimum effort. Mueller and Dweck (1998) and McElwee* (2010) suggest, for example, that praise for intelligence can undermine high IQ children as the emphasis is placed on some factor they cannot control rather than on what they need to do to nurture this intelligence and benefit from it. This often leads to the individual never acquiring the sense that reward and success come from effort, diligence and perseverance as well as intelligence. Many participants in the study mentioned never having learnt to learn or having had to work hard up to a certain level of study,

by which time it was too late. This experience was seen as having had negative consequences for the overall management of their life. As McElwee* (2010) argues, the relationship between effort and outcome is what creates the sense of internal control that differentiates achievers from underachievers. It is from accepting and conquering challenge that one builds self-confidence. It is from actual achievement that one develops a strong self-concept. High IQ underachievers in the sample felt that they had been denied the possibility of acquiring confidence since they had not experienced the relationship between effort and achievement or competition with others. This may be why so many reported having become 'lazy' and unable to find any motivation to 'achieve'.

Comments from participants 63 and 101 respectively illustrate this:

"I think that the worst thing you can do to a clever child is not teach them that what matters is effort and hard work by rewarding them for something they value rather than stupid tests they can do standing on their head and are completely meaningless to them."

"If I could meet myself as a child I would just keep telling him that you are smart but you need to work. After all, as they say, it is only in the dictionary that success comes before work".

It is understandable that teachers feel that children should not be labelled on the basis of an IQ score, at a young age especially. Yet, if they were made aware of the

long-term consequences of high IQ children not being identified early in their educational journey, they may understand how helpful testing and labelling can be in some cases.

Singh (2004) and Laughlin and Boyle (2007) for example propose that a diagnosis or label may be useful for the teacher, the parent and the child as it provides an explanation for a child's characteristics and behaviour. It can also ensure that their difficulties are officially recognised and addressed positively by the teacher. Indeed, Laughlin and Boyle (2007) posit that labels may be useful because they are needed for resources to be allocated.

7.2.5 Confusing terminology

As mentioned in the literature review, the term 'special educational needs' has a legal definition. It refers to children who have learning difficulties or disabilities that make it harder for them to learn than most children of the same age. The term 'special educational needs' may therefore be confusing when used in relation to high IQ children who may find it easier to learn. A term such as "differentiated" may be a better way of defining the educational needs of high IQ individuals. It may illustrate better the concepts of acceleration and enrichment of the curriculum which define the needs of gifted children. On the other hand, one could argue that such terms

may be interpreted by some as a further expression of privilege and, therefore, unlikely to be considered positively.

Indeed, parents who have a gifted child may defend their cause with passion and feel that s/he should receive extra support in order for the child's ability not to be wasted. Parents who do not have a gifted child on the other hand may oppose it as they cannot understand why resources should be spent on children who already have 'a great advantage'. This may be particularly true of parents whose child's disability is more visible, more severe and, therefore seemingly more deserving of extra support. Several participants in the study commented that, in their school, priority seemed to be given to pupils who were experiencing difficulties in studying because of their seemingly low IQ to the detriment of those who were experiencing difficulties because of their high IQ.

In addition to this, parents who may not fully understand what being gifted means and who assume that it is something superior and desirable may want to believe that their child is gifted on the basis of a few things they have noticed the child saying or doing, rather than on the basis of a proper assessment. They may then request that the school and teachers provide special education for their child when, in reality, s/he does not have any particular special needs. Such parents may irritate teachers and the claim that their child is gifted may, as a result, work against the truly high IQ children.

7.2.6 Gifted children are 'inconvenient'

Freeman (2005) also suggests that children need permission, courage and resilience to be gifted, because, as posited by Persson (2009a:915), "Gifted individuals are inconvenient" [.....] "Along with the promise of potential, come the problems of potential - problems that are often a direct effect of differing from the norm in ways that others are not necessarily prepared to deal with. Persson (2009a) also observes that when gifted individuals pose a perceived threat to power structures and authority (even if they are not intentionally one), at whatever societal level and context, they are very likely to be considered unwanted and inconvenient. As children, they may make their teachers feel uncomfortable. As adults, they may encounter problems in the work place when they are seen as a threat by their managers, for example, (Nauta and Ronner, 2013; Falck, 2013).

7.2.7 Gifted children may represent a threat for their teachers

Teachers may find it easier to be successful with children of average or above average ability with whom they can relate well. Several participants mentioned resenting the attention given to peers who, they thought, were not as bright as them but who knew how to please the teacher whether they did not. They felt that teachers favoured and rewarded diligence over intelligence as children who are quiet, conform and do as they are told are easier to manage as a group. Several

participants believed that teachers may also find children classed as having 'low ability' easier to cope with because their low academic attainment is perhaps less likely to be questioned than that of high ability pupils.

Participants also commented that, in some cases, very bright children may be felt to be a threat to teachers who are not very highly qualified, are inexperienced and who may lack confidence in their own knowledge of subjects they teach. Their reaction to this threat can be to impose their authority on the child in order to silence them.

Persson (2009a) suggests that high IQ individuals' knowledge and insight, (children in the school system and later as adults in the work place) enable them to publicly expose flaws and incompetence in social systems. As a result, they can pose a threat to the dominance of a certain individual or group of individuals. This is especially true for those who have personal gains to make if systems remain unchanged. In the case of teachers, silencing an inconvenient child may be a lot easier than catering for his/her needs. Some participants suggested that being aware that the child was very bright yet underachieving may be seen as a reflection of the teacher's poor skills and, for this reason, had to be hidden in some way. Blaming the child for his/her poor performance was seen as an easy way of hiding the teacher's incompetence.

As participant 85 put it:

“How intelligent people are handled by less intelligent people, especially those in authority, is critical to them achieving or not achieving. Teachers may feel threatened by smart kids and, because they have authority over them, they may (consciously or not) punish them for being too smart”.

7.2.8 Gifted children may represent a threat for their peers

A child who represents any form of deviation from the norm is at risk of being shunned or bullied by his/her peers. As revealed by participants in the study and bright children today (appendix 13), being labelled as very clever is not a good thing for one's popularity in some schools – especially in the teenage years. Adults in the research carried out by Nauta and Ronner (2013) and Falck (2013) revealed that their superior ability to understand and solve problems often caused scorn and even hatred from insecure colleagues. The terms ‘smart arse’, ‘know it all’ and ‘geek’ frequently used to describe them were not perceived to be meant as a compliment.

In the school context, teachers who want harmony or do not know how to cope with a particular child's intelligence and demands may seek to diminish their extraordinary intellect so as to protect and not undermine others pupils' lower achievements. In order to avoid resentment from the majority, teachers may find it easier to side with it than with the high IQ child. Participant 46, for example, mentioned being unfairly treated over very good results.

"I had got the best results by far but the teacher told the class that a certain girl had. When I tried to protest I was immediately silenced. I can only conclude that this teacher was ashamed that I performed so poorly on the stupid tasks he set but outperformed everyone by a long shot in 'official' tests."

Indeed, this sort of treatment was seen by participants as the reason why they had gradually learnt 'not to achieve' so as to avoid being treated unfairly by teachers and bullied by their peers.

7.2.9 The nature of the different needs of gifted children is misunderstood

As illustrated by the participants' comments and Gross (2004), it is not uncommon for teachers to give extra work to children they perceive as very bright. However, often it is work of the same difficulty and the focus is on the quantity that the child can produce rather than the higher levels of difficulty the child needs. It is often used as a way of keeping the child quiet whilst the others 'catch up'. This can be extremely demotivating. As a reward for having understood and shown that they could complete the work more easily than their peers they are given more of the same, which soon appears pointless and leads to disengagement with the task in hand (Gross, 2004). Similarly, some participants mentioned always being asked to help other pupils whenever they had finished their work early and being at a loss to understand how this was helpful to them in any way. Again, this encouraged them

to keep quiet and not reveal that they had finished the work early. Some used the time profitably by reading books under their desks whilst others just simply kept their heads down until it was 'safe to re-emerge'.

In other words, even when teachers acknowledge that a child is exceptionally bright and think that they are catering for their needs, and praising them by providing what they see as 'extra' work, they are not truly helping the child. The child may then appear ungrateful when not responding appropriately to these 'extra' tasks and becomes alienated from/disliked by the teacher – once again being held responsible for not engaging 'appropriately' with the work that the extra work set by the teacher.

The following comments from participants 77, 85 and 224 respectively illustrate this:

"This teacher was very good and would give the class the lesson which we had to do and then she would add a couple of more 'in-depth' questions for me to do in addition. She did this via a lesson sheet so the rest of the class didn't see I was doing anything different from them. This kept me challenged and interested. The next year I had a different teacher who just added extra homework i.e. he increased the workload rather than the challenge, quantity not quality and I got bored with it. There were no changes after a discussion with him so I told him to stop the extra work as it wasn't achieving anything. I was reported as being 'difficult'."

"I think high intelligence has to be designated a special educational need. I have a strong memory of being patient with tasks that I found boring and

routine in school and always hoped that it would get better and more interesting. It never did. When my primary teachers turned on me for being clever, as I saw it then, I began to reject the notion of school as it was presented to me then”.

“I had no ambition or motivation because what I was expected to achieve seemed so mundane I was not interested.”

One could argue, however, that being at the receiving end of poor experience was a good thing in some ways as it helped several participants like participant 85 become the teachers they would like to have had as follows:

“Writing all this has given me an insight into why I might want to be the type of teacher I am, or indeed a teacher at all: to give a better experience than I had.”

“Interestingly, I seemed to develop as a very good teacher myself; good results with my pupils, particularly good with bright (and difficult) children and I am apparently well-liked. I am definitely not aware of deliberately trying to be the opposite of the teachers who had ‘failed’ me, so maybe an unconscious ‘osmosis’ was at work”.

7.2.10 High IQ children represent a small minority

Although during the course of their working life they are likely to meet many children in the 110-125 IQ score range (the ‘good’, high achieving pupils), teachers may not come across more than 7 or 8 very high IQ children in an entire career. It could be

argued, therefore, that it seems unnecessary for them to learn how to cater for such children. There are indeed many other pressures coming from the other pupils in their charge, some of whom with relatively greater difficulties.

Yet, nobody would ever suggest that because individuals suffering from schizophrenia or celiac disease or anorexia nervosa only represent one per cent population, doctors should not learn to identify and treat these conditions. Whilst the negative consequences of not dealing with the above are known, the long-term effects of not dealing appropriately with giftedness in the school context had not thus far been explored. These are now discussed in the next section.

7.3 Long term effects of underachievement or delayed academic achievement

For the 64 participants (40.1% of the total sample) who were spurred on to returning to education, often because of discovering their high IQ as an adult, the journey towards their academic achievement was often far from smooth. They reported that they encountered many difficulties that could have been prevented had the right systems been in place when they were children.

As previously mentioned, there seems to have been very little research carried out about what happens once high IQ underachievers leave the compulsory education system. Most of the observations below are therefore based on the surveys and

interviews carried as part of this investigation and, as such, they represent a contribution to new knowledge.

7.3.1 Difficulty of returning to education with low level qualifications and low self-esteem

One important reason why 50% of the participants obtained their undergraduate qualifications via the Open University was that it does not have the standard entry requirements for universities. As quoted on the its web site, 'The qualifications students have when they leave are the only ones that matter'. Therefore, they were able to access higher education despite their poor school records. Whilst many of them found that distance learning was ideal for them, they also expressed regrets that they had not been able to attend a traditional university (for which on the basis of their high IQ, they may very well have been qualified) and had missed out on the social life aspect of university education.

In addition, poor self-esteem and fear of failure were omnipresent. Comments below from participants 33, 38, 57 and 139 respectively illustrate the difficulties experienced when deciding to obtain academic qualifications in adulthood when one's early experiences of education have been poor or even traumatic.

"If you have a long history of failure it is hard to feel confident."

"I am to a very large degree still overcoming my academic failure. I don't think I will ever overcome the initial failure so I am embarked on a course of damage limitation".

"Although much had improved and my general confidence was good, I found that in academic study I was still affected by memories of my experience at xxxxxx and its aftermath. I was still terrified of academic failure because of the awful consequences it had brought to me earlier in life. Although I tried to control it, I think this fear stifled my ability to completely relax and put forward my best effort".

"Being 'a failure' affected my self-confidence and had a very negative impact on my whole life".

All these experiences seem to have been made worse for the participants who, in keeping with research about the personality traits of high IQ individuals (Siaud-Facchin*, 2008; Webb, 2014), claimed that they tend to always over-analyse situations. For example, even once they had been admitted to Mensa, many participants still doubted the results of the test and their high IQ score. Six of the interviewees commented that being intelligent means being acutely aware of what you do not know. Doubting their own abilities was a very common occurrence amongst the participants in the study, especially if for several decades they had believed that they were not academically-minded.

7.3.2 Difficulty in choosing an area of study

Although this is increasingly less so because of the financial implications, making the wrong choice of subject to study at university does not have too serious consequences at the age of eighteen as one can change direction and begin again after a false start. However, for individuals in their late twenties, thirties or forties the margin for error is small as time is of the essence and fear of failure may be greater. Difficulty in choosing a pathway was quoted by many participants because they were equally interested in many different subject areas – one of the main characteristics of high IQ individuals. Indeed, as posited by Kerr and Cohn (2001), high IQ individuals encounter problems when decisions must be made about university or career pathways. By choosing one path, other alternatives are negated, resulting in decisional anxiety. Kerr (1991) suggests that their wide range of interests was one of the most frequent causes of gifted individuals' difficulties in career development. The following comments made by participants 9, 68 and 151 respectively illustrate this point.

“Another great hurdle for me was the fact that I loved so many things, it (choosing one subject area) was like choosing a single puppy from a beautiful litter.”

“My lack of direction may relate to the fact that I was interested in, and showed talent in, many areas, so it was difficult to focus on just one.”

“I have been described as a ‘polymorph’ by those in the know i.e. I have a degree in chemistry, an accountancy qualification (FCCA), two music diplomas and have just taken my flute performance LRSM as well as started to study for a new degree. Concentrating on one subject area would feel very limiting.”

On the other hand, once they had embarked on their successful journey, several went on to acquire one or more higher qualifications (BA/BSc, Master’s degrees and PhDs) in very different subject areas.

7.3.3 High cost and potentially poor return on investment

Very few participants were able to return to study full-time as they needed to work in order to finance their studies. Studying part-time takes twice as long as studying full-time and several mentioned that it had taken a lot of courage to start studying again at what seemed to be an ‘advanced age’. There was some resentment expressed at what, because of the circumstances of their earlier education, would take years for them to achieve when others had achieved the same by the time they were eighteen years old. Those who had families when they went back to studying found that it was hard to find the time to dedicate to their studies. This, however, probably applies to many mature students.

Furthermore, the financial cost for those who studied with the Open University was relatively high and many felt that, nowadays, it would be extremely difficult for them to embark on part-time study as mature students. The cost of fees and the difficulty of obtaining loans for part-time study, especially if one has a poor record of academic achievement, were quoted as being prohibitive.

In addition, according to the experience of the participants, the later the academic qualifications were obtained, the less likely it was to have an impact on job prospects and career advancement. As such, it was felt to be a poor return on investment and mostly a boost to self-esteem rather than something likely to affect professional life positively as expressed by the respondent 142:

“Sooner would have been better. Graduating at 50 was a boost to my self-esteem but a little late for it to influence my career!” (No 142)

7.4 Reasons why government agencies should care about the low or delayed academic achievement of high IQ individuals

7.4.1 A heavy economic cost for society

Ninety eight participants (62.3% of the total sample) felt that their academic underachievement had had a very negative impact on their job options and

earnings, many quoting significant financial loss (loss of earnings and meagre pension, for example). They felt that they had wasted a great number of years in unsuitable, low-paid, jobs or having had to rely on government benefits. Their lack of qualifications had led to poor motivation towards employment as it could only be of a low level nature. Living on government benefits and in relative economic poverty was seen as preferable to living in the intellectual poverty which would have resulted from being engaged in what they described as 'mind-numbing' jobs.

Even those whose academic achievement was delayed (rather than non-existent) and who had been employed regularly felt that they had suffered economically and that this had had negative repercussions on their own and their family's well-being, as follows:

"I very much wish the reversal had come earlier. Not having qualifications had a very detrimental effect on my working life and earnings."

"I would have had a better paid career, with more interesting work. I regret I had not had the opportunity to go to university at 18 as this would have led to a different career path."

"I cannot bounce back from my earlier underachievement because the opportunities have passed."

In addition, the fact that depression, as one of the consequences of their underachievement, features highly is of course distressing for the individuals concerned. However, equally or even more concerning is that, according to the Mental Health Foundation (2007), the 'hidden' costs of mental illness also have a very significant impact on public finances. Evans-Lacko and Knapp (2014) suggest that the cost of depression through lost working days are 23 times higher than the cost to the National Health Service of the medical treatment of depression. They report that the illness now costs European workplaces an estimated £77 billion a year, the greatest economic loss being through absenteeism and lost productivity.

Many participants did indeed mention being or having been on extended sickness leave for depression which had limited their potential positive contribution to society.

Persson (2009b) suggests that there is a belief that giftedness is welcomed and encouraged on all societal levels on the grounds that high IQ individuals contribute positively to society. However, this research revealed that in some instances this was not the case. When their educational needs had not been identified or catered for, high IQ individuals were at high risk of underperforming academically and of not contributing positively to society - even sometimes of becoming a burden for society.

In general, individuals who make a more positive economic contribution to society tend to be those who earn higher wages, pay a higher rate of income tax, consume more goods and have no need to use social services or rely on benefits. It could be argued, therefore, that it should be of great advantage to ensure that all those who have the ability to obtain qualifications are educated in a way that enables them to contribute as positively as they can to the economy of the society they live in.

Furthermore, a great deal is potentially lost to society if high IQ individuals, who tend to be highly creative in their thinking and have great ideas for projects that could advance knowledge never follow them through because of lack of perseverance. High IQ individuals who find everything easy in their school years often do not experience what it means to persevere. Never having had to work hard towards achieving what they see as a worthwhile goal ends up being detrimental when this tendency extends into adulthood (Siaud-Facchin*, 2008). Several participants conceded that not having experienced the sense of achievement that comes from completing a worthwhile project may be the reason for their lack of motivation and their learned helplessness when confronted with a task. This matches what Dweck et al., 2004 report. It could therefore be argued that the discrepancy between what they are capable of intellectually and what they achieve in life, rather than just academically, is a great loss not just to them personally but for society as a whole.

According to the International Monetary Fund (2012), the wealth of a society depends on a structure of institutions which can harness the talents and skills and ideas of its people. A report entitled 'Education and the wealth of nations' published in the Economist magazine of March 1997 stated that it was taken for granted that, all over the world, educational achievement and economic success were closely linked. It also argued that the struggle to raise a nation's living standards was fought first and foremost in the classroom. It went on to comment that among emerging economies, the most successful were the ones that had educated most of their workers up to, and often beyond, levels typically achieved in the West.

In February 2014, a report by the Organisation for Economic Co-operation and Development (OECD) reported that British schoolchildren were lagging so far behind their peers in the Far East that the performance of pupils from UK wealthy professional backgrounds was now worse in exams than the poorest students in China. There is no scope within this dissertation to compare education systems or discuss the pros and cons of various philosophies or teaching and learning methods across the world. However, it is worth noting that this OECD report was published at a time when politicians attacked the standards of British schools and suggested that the UK pupils' poor performance is the reason why Britons cannot compete with foreigners for jobs.

According to deGrasse-Tyson (2012), a country should look after its brightest as they are the ones who will have the capacity to explore ways of improving the nation's well-being and the future wealth of that country.

He suggests that not investing in the education of high IQ children, resulting in their gifts being wasted, does not only represent a great loss but also a long-term cost to society.

He also posits that to be persuaded that something is worth doing, governments and funding bodies must understand the economic argument of the proposition which, in this case, he claims is as follows:

"A society that devotes public funds to helping high IQ individuals develop their potential is investing in its future. One that does not is divesting its resources."

Another point worth making here is that many participants had concluded from their personal experiences that economic and financial success was not for them an important goal in life, especially if it compromised morality and ethical behaviour. They defined 'success' in other ways.

Seven of the interviewees out of 10, for example, mentioned that they attached great importance to promoting the truth, justice and fairness and the cause of the 'underdog'. Three had resigned from senior positions or been side lined for refusing to act in a way that they found unethical, even it may have brought them financial and other rewards. They maintained that integrity was one of the quality they valued the most in themselves and others. All these qualities, according to them, were greatly missing amongst those in power who, at all levels of society, make decisions that affect the lives of thousands or even millions of people. They had concluded that this was the reason why corruption and greed were such problems around the world.

Participant 36 commented for example that:

"Some of my 'successful' friends became less than inspiring adults and I have no desire to have any contact with them now."

Many of the recent scandals highlighted in recent years, such as the mortgage subprime crisis or fraudulent activities such as the Libor rate fixing scandal, affected negatively millions of people worldwide. They have been linked to incompetence and lack of integrity as well as the pursuit of wealth by a few regardless of the consequences for the majority. Thus, it could be argued, even if a little naïvely, that if the high IQ individuals of this study are a representative sample of many others

like them - who seek the truth, justice and fairness for all and value integrity – had been able to realise their potential, the world may be a better place. High IQ individuals may have different priorities for the good of society, as suggested by participant 27 below:

“I have worked for companies like MasterCard, Mercedes Benz, VW, Bosch, Philips, Lufthansa, Motorola and Nokia all of whom are engaged in what I believe to be pointless activities. Nobody should need a credit card, a fast car or a mobile phone. By contrast, there is always a need for planting crops and building affordable living accommodation. To spend most of my life engaged in the pointless endeavours of these organisations was probably more of a factor in my frustration than my original academic failing.”

Chapter Six described how all ten interviewees were in occupations that, in various ways, were trying to improve the life of people around them and making the world a better place, especially for disadvantaged individuals.

Six of the ten interviewees mentioned that they despaired about a society which they saw as promoting stupidity and ‘pointless’ activities over intelligence and valuable scientific projects, for example. They commented on the ‘obscene’ amounts of money spent on popular TV programmes, on films or on footballers whilst research projects vital to the future of humanity such as medical research or the NASA space programmes were starved of funds.

They deplored the marketing tactics of major global organisations which they saw as reprehensible and motivated by greed and disregard for other people. The example of the highly profitable industry built around the created needs for special 'jogging' clothing and shoes was one that one participant used as an example: all these items are manufactured at very low cost in poor countries that exploit people, including very young children. They are then sold at ten times the manufacturing cost to millions people do not question their motivations and actions, helping keep the world as it is rather than promote progress.

One could suppose, again somewhat naïvely, that if a greater number of high IQ individuals who believe in fairness and value integrity, had a leading role to play in society, there may be less corruption and injustice in the world.

In addition, out of the ten individuals interviewed, seven did not have children, by choice, despite being happily married. The main reason given was that they did not want to reproduce their own unhappy childhood. They feared that they would not be able to afford private education and that the education provided by many state schools fell too short of the necessary standards for very bright children. The other three, who did have children, had made sure that they were privately educated despite the very high cost entailed and were proud of their academic achievements (Master's degrees and PhDs).

With hindsight, it would have been interesting to find out from all participants whether they had children or not and what their experience of education had been as it could have provided a fuller picture. However, the trend revealed by this small sample is rather concerning. As a high IQ is mostly genetic, if high IQ people do not have children, the pool of high IQ individuals will diminish and this cannot be good for society's future.

Furthermore, if those who do have children rely on private education because of their own experience of state education, they are less likely to fight for the cause of high IQ children in state schools. This could also be seen as a worrying trend.

7.4.2 A heavy personal cost for high IQ individuals

As well as the consequences for society as a whole suggested above, the results and findings from the questionnaires and interviews highlighted the undesirable effects of their unrealised potential on the surveyed individuals' mental well-being. These could provide a powerful argument for ensuring that the special needs of high IQ individuals are acknowledged and catered for.

Fisher and Gunnar (2010) suggest that not catering for the individual needs of children is a form of neglect and maltreatment and that exposure to childhood

adversity has a significant impact on adult mental well-being. They argue that denying needs and preferences and failing to provide the nurturance or stimulation needed for intellectual growth amounts to neglect. They define neglect as a caregiver's lack of attention to a child's needs. The latest research shows that neglect has a lasting and permanent impact on the brain.

The consequences in adulthood of physical and emotional neglect in childhood are well documented (Springer et al., 2007; Leeb et al., 2011; Gould et al., 2012; Herrenkohl et al., 2013). However, there seems to be little written so far about the long term consequences of what could be termed 'intellectual neglect' in childhood.

Silver* (2013) posits that traumatic childhood experiences lead to children to being more or less permanently on the alert for new threats which can seriously affect concentration and lead to impaired attainments relative to intellectual capacity. Silver* (2013) also argues that functional imaging such as PET (Positron Emission Tomography) and MRI (Magnetic Resonance Imaging) can now show that the physical impact on the brain of neglect is evident in terms of volume, connection and density.

Bruce et al., (2013) also suggest that science is becoming increasingly precise about what parts of the brain neglect can affect — the two main areas being, cortisol production and physical changes to the prefrontal cortex (the area of the brain that

influences cognitive decision-making).

Fisher and Gunnar (2010) and Silver* (2013) report that traumatic childhood experiences have repercussions on attitude to learning, attainment, self-esteem and belief in ability, as expressed by many of the participants, and these are believed to be one of the triggers for depression in adulthood. Indeed, this research revealed that the participants' perception of 'falling short of potential' impacted heavily on their life satisfaction, self-esteem, and sense of identity as adults, all of which had been part and parcel of their depressive state.

Children or adolescents who are not given the opportunity to use their cognitive capacities as they were intended to be used may feel permanently under threat. For example, as suggested by Daniels and Piechowski (2009) spending a lot of energy on fighting boredom or hiding their high IQ in order not to appear different from their peers and avoid being bullied was, according to the participants in this study, very traumatic.

As participants 20, 54 and 211 respectively put it:

"My attitude to school was that of a soldier in the trenches in the First World War. I thought only of surviving. All my energy was spent trying to sustain myself in the face of onslaught".

“The conditions generating my underachievement have rendered me as emotionally and personally disabled as if part of my brain had been destroyed or legs had been amputated at the hips.”

“At school I was held back, which, was a bad thing, because all that mental energy needs to be directed in some direction. I believe, looking back, that I probably suffered from depression at school because there was no outlet for this mental energy”.

Not understanding the differences caused by their high IQ, or understanding them but not knowing how to cope with them, may generate stress which, in the long run, can impact on intellectual and emotional capacity (Daniels and Piechowski, 2009).

Indeed, living with mental energy that cannot be unleashed, having to adjust to constraints they do not fully understand and which amount to shaping them into something they are not can be very damaging (Ruf*, 1999; Jones, 2013; Webb, 2013; Webb, 2014). This could be compared with living in a strait jacket out of which individuals will either try to escape at all costs or into which they will attempt to slim so that it does not hurt any more.

Daniels and Piechowski (2009:4) suggest that “gifted children’s excitement is viewed by others as excessive, their questioning as undermining authority, their imagination as not paying attention, their anti-conformism, creativity and self-

directness as oppositional". In other words, they are characteristics that need to be suppressed in order to fit in the classroom - or even at home in the family context. This may lead to undermining the children's belief in their abilities, stopping them from developing them and causing confusion about their identity. This in turn can lead to mental health problems such as depression (Neihart*, 1991; Baker, 1995; Neihart, 1999).

According to the Mental Health Foundation (2007), 9% of the population in the UK meet the criteria for diagnosis of clinical depression at some point in their life. This study highlighted that 43 (27.6%) of the 158 participants in the first questionnaire had mentioned that they had at some point had to be medically treated for depression. Six interview participants revealed similar circumstances, despite not having highlighted them in their responses to the questionnaires. One could assume therefore that the instances of mental health problems amongst the participants was actually even higher than stated in the results of the surveys.

Similarly, Falck (2013) found that, although not mentioned in their questionnaire, participants in her study revealed during interviews that the difficulties (linked to their high IQ) they were experiencing in the work place had caused them to suffer from depression and anxiety.

Comments from participants 39, 71 and 203 respectively were as follows:

“By 21 I found myself on a psychiatric ward being treated for severe depression because of my unhappy experiences of education”.

“I have been clinically depressed and have needed lengthy therapy to stop dwelling on my mistakes and failures.”

“I think it has made me very depressed at times in my life, and I have had psychiatric referrals for depression and anxiety. I internalised the failure and decided that it was a consequence of my own worthlessness. I dismissed any signs of my ability, such as passing the Mensa test, as flukes.”

Although the sample was too small to be statistically significant, one could deduce from the results of the surveys that there seems to be a higher incidence of poor mental health in adulthood in the sample of this study than in the general population. Chapter Five revealed that many participants had experienced gradual changes in personality and behaviour from being happy and extrovert to being unhappy and introvert. These had been gradual over several years in childhood and adolescence and they attributed these changes to their academic underachievement. In view of the variety of backgrounds represented by individuals in the sample and the fact that the majority of participants felt happy in the very early years of schooling, it may not be unreasonable to suggest that the common link with poor mental health may be, amongst perhaps other factors, being deprived of the intellectual stimulation they needed as a child or adolescent and their resulting frustration and unhappiness.

As already mentioned in the Literature Review, the particular type of depression experienced by high IQ individuals tends to be that which occurs when one confronts issues of existence such as life, death, disease, and freedom (Webb, 1998; Weismann-Arcache, and Tordjman, 2012; Webb, 2014). Depression may arise from helpless anger at situations over which one feels has no control (Webb, 2014) and which lead the individual to feel trapped. Although there are no reliable figures, it has been suggested (Baker, 1995; Siaud Facchin, 2008; Bost*, 2011; Webb, 1998) that suicide rates are higher amongst high IQ adults than in the general population. This was illustrated anecdotally by three sets of parents whose child had committed suicide in their twenties and thirties responding to the appeal when they heard about this study. They had made a connection between high IQ, underachievement, existential depression and suicide and wanted this research to mention it.

Yet, so far, according to a literature search conducted, there does not seem to be much knowledge or understanding amongst medical practitioners, psychotherapists, counsellors and psychologists of the link between high IQ, underachievement and depression (Siaud-Facchin*, 2008; Webb, 2014). This makes it difficult for individuals seeking help through therapy, for example, to be understood and supported adequately.

The term 'intellectual' neglect is the one that is suggested for describing the lack of intellectual stimulation experienced by high IQ individuals who are prevented from using their full mental capacity, in the classroom context for example. It is a powerful descriptor which clearly indicates that the problems experienced by underachieving gifted children are the results of external factors, something 'done to' them rather than something of their own doing. The long term impact of physical and emotional neglect in childhood is well-documented (Cross, 1996; Fisher and Gunar, 2010; Leeb et al., 2011; Gould et al., 2012; Herrenkohl et al., 2013). Further research is of course needed about the failure to provide the intellectual stimulation suited to an individual's needs in childhood and its long term impact.

As acknowledged previously, this research was small in scale. However, it does suggest that, if the term 'intellectual neglect' was as well understood as emotional and physical neglect, more attention may be given to the difficulties encountered by underachieving gifted children and support more readily provided.

7.4.3 Recent government initiatives attempting to solve the problems

7.4.3.1 The Gifted and Talented Programme (2002-2012)

A recent attempt at formally providing extra support for high IQ children was made via the 'Gifted and Talented programme', a United Kingdom government scheme set up in 2002. However, its limited success was highlighted in the 2009 Office for

Standards in Education, Children's Services and Skills – England (Ofsted) report on 'Gifted and Talented in Schools' as shown in appendix 14.

Smithers and Robinson (2012) posit that, whilst set up with good intentions, the Gifted and Talented programme design and implementation left much to be desired. For example, they comment that the identification of gifted and talented pupils for the programme depended on very subjective factors: selection by teachers on ill-defined criteria and, sometimes, even nomination by parents. In addition, the requirements for all schools to submit identical percentages (10-15%) of 'gifted and talented' pupils led to meaningless selection. In addition, Smithers and Robinson (2012) claim that the programme followed in many ways a 'bolt on' rather than a holistic approach and (although they do not explain in what ways) compared very unfavourably with schemes set up in other countries. The programme was, indeed, finally deemed flawed and abandoned in 2012.

Yet, in June 2013 another report bemoaning the plight of 'the most able' children in schools (see appendix 14) was published by Ofsted, implying that measures must be taken urgently to help them.

The extensive research carried out as long as 70 years ago highlighted the phenomenon of underachievement amongst high IQ children (Hollingworth, 1923 and Terman, 1947). Further research over the last 50 years (Baymur and Patterson,

1960; Rim, 1986; Adda* and Catrou*x, 2003; Berger* and Francequin**, 2005; Sternberg and Grigorenko, 2007; Renucci* and Colomb*, 2008; Stoeger, 2008) not only explained the phenomenon but spelt out how gifted children's needs could be catered for.

Yet, the dispiriting experience of many gifted children today is illustrated in appendix 12 and is very similar to that described by the participants in this study who experienced the education system between 20 and 50 years ago. It would seem, therefore, that findings from previous research have not been translated into appropriate action.

As participant 226 put it:

"How sad that educational circles still don't seem to be identifying and helping gifted children. One always assumes that things have moved on since one's own childhood. Apparently not!"

It does seem odd that there is still general misunderstanding amongst educators, policy-makers, and government agencies about the phenomenon of gifted underachievement and its causes and cures. This could partly explain the lack of consistency in policy. Smithers and Robinson (2012) argue that British government initiatives are too numerous and mostly ill thought out and the frequent changes of

direction could be a very important factor in the academic underachievement or delayed achievement of high IQ children.

In other words, even when it is acknowledged that measures should be put in place to cater for the needs of gifted children, their design and implementation remain a challenge.

7.4.3.2 The 2014 Special Education Needs Code of Practice (2014)

The educational needs of gifted children do not seem to fit the description of special needs or learning difficulties in the wider context of child development and legislation. Only those who are twice exceptional may benefit from special measures because of their disability or learning difficulty, rather than their high IQ.

The latest government's Special Educational Needs and Disability (SEND) initiatives and new SEN Code of Practice (2014) appear for the first time to emphasise the link between health (the medical aspect of disabilities) and education provision. The findings of this research suggest that there may be a potential link between lack of sufficient intellectual stimulation in childhood and mental health problems in adulthood such as depression. One could assume, therefore, that highlighting this phenomenon would signal the need for provision of special educational needs for

gifted children to be addressed in future. Yet, informal discussions with SEND experts did not provide much hope in this direction.

Many responsibilities will now be devolved to schools and head teachers. However, unless they understand why high IQ children have special educational needs, and how costly it is in the long run not to cater for them, little progress may be made. If funding is limited, schools may have to make choices which could involve prioritising children whose disability or difficulty is more visible and or assessed as more severe. In addition, because the consequences are long-term and funding is limited, it may be tempting not to help gifted children, whose difficulties are invisible or not fully accepted and understood, and quietly leave them to fall by the wayside.

The emphasis on making sure that 'no child is left behind' sometimes results in making sure that 'no child gets ahead' either.

7.4.3.3 The 2014 Children and Families Bill (2014)

In addition, with the newly proposed Children and Families Bill, education, health and social care services will work together to assess needs and produce an Education, Health and Care (EHC) plan. Money will be given to parents and young people to spend on meeting their own needs. However, it would seem that it may be more difficult to obtain an EHC than it used to be to obtain a statement of needs.

Furthermore, the bill focuses on outcomes rather than provision and schools will be given a lot of freedom to decide what or who to support. Whilst a more holistic understanding of the child's needs and outcomes will greatly improve the ability of the child to reach their full potential and progress in school, one can question how equality of provision throughout the UK will be achieved. Questions are being raised as to what will happen if a school does not believe that a child has special needs and disqualifies him/her from additional support. Furthermore, one can speculate that middle class educated parents are more likely than others to be able to fight for resources for their children.

There is therefore much confusion between what is seen as desirable by the government in place, what is actually needed and what may be provided. This makes a teacher's job extremely difficult in general but especially in terms of supporting the needs of gifted children. Yet, as explained below, there seem to be easy and low cost ways of dealing with the challenges.

7.5 Effective yet low cost suggestions for educators, policy-makers and government agencies

To ensure that they reach their potential, attention and support is rightly given to children whose other learning differences are causing them difficulties in the mainstream education system. Considering the difficulties encountered by gifted

children and how much their exceptional abilities could benefit society if their differences were catered for by the education system, it seems only right that solutions are found to help them.

Even assuming that the child has been identified and the teacher knows what to do, catering appropriately for the additional needs of a high IQ child in one class could mean a lot of extra work for just one child. This may not always be welcome by teachers who are already under a lot of pressure. They may also believe, erroneously, that since the child is very bright, s/he will always be fine. At secondary level, a teacher will only see the same pupils for a few sessions per week and high IQ pupils who do just enough not to get into trouble are even less likely to be noticed and catered for than at primary level.

Therefore, it is important to find ways to improve the experience and attainment of high IQ children within the standard UK classroom in practical terms and in a world of finite resources.

Taking examples from what is done in different countries (Freeman et al., 2010) and, bearing in mind that prevention is better than cure, the following are brief and general suggestions that were made by participants about what could be changed so that this phenomenon of 'gifted underachievement' can finally be addressed properly. These suggestions are meant to get educators, policy makers and

government agencies thinking about different and fairly simple ways of providing for high IQ children's educational needs in the mainstream school system. The following are possible recommendations for practice.

7.5.1 Acceleration and Enrichment

Highlighted in the Literature Review and the analysis of the questionnaires and interviews was the fact that high IQ children need acceleration and enrichment of the curriculum. This enables them to learn at their own faster pace and to consider aspects of the curriculum in greater depth than their peers. Although some disagree with this principle (Freeman, 2010) many studies have shown that, when acceleration and enrichment of the curriculum are provided, gifted children can flourish (Gowan, 1957; Rimm*, 1986; Rimm*, 1989; Baum et al., 1995; Reis, 2000; Colangelo et al., 2004; Stoeger 2008).

Firstly, however, early identification of signs of high IQ or giftedness is vital and Early Years and primary teachers have an important role to play. Part of their training should give them the means of identifying characteristics of high IQ behaviours so that children exhibiting them can be referred to be formally assessed, if necessary.

Secondly, the concept that the asynchronous development of gifted children means that acceleration through the curriculum may be harmful for their emotional development (Freeman, 2010) should be questioned again. Each case should be assessed on an individual basis. Allowing a child to move up one or even two levels in some subjects if their intellectual abilities allow it costs nothing and can be very effective in some cases.

Thirdly, the Literature Review highlighted that gifted children tend to be independent learners and participants also revealed a very strong preference for a learning system such as distance learning that enabled them to progress at their own pace. It is suggested therefore that harnessing the power of on line' or distance learning in schools may provide an easy solution to provide acceleration and enrichment.

7.5.2 An on-line National Curriculum bank

It is somewhat unrealistic to expect a teacher to develop materials for one child, especially if the materials that are needed go beyond the teachers' own knowledge of a particular subject. A fairly simple solution may be an on line National Curriculum bank of learning and assessment materials enabling gifted children (or indeed other pupils) to work at their own pace within the normal classroom context. On line materials adapted to the National Curriculum already exist and so do a variety of materials available for example from Potential Plus in the UK (formerly the

National Association of Gifted Children) and many other organisations in the USA. Their aim would be to provide the opportunity to study all subjects at a faster rate and in greater depth than the standard age-based curriculum allows. These could be accessible on line by all schools in the UK and would enable the few children who have a high IQ to progress at their own pace and feel stimulated by appropriate level material. According to the national statistics of the Department of Education (June 2013), there are currently approximately eight million pupils in primary and secondary schools in the UK. The top 2% in terms of cognitive ability represent 160,000 students – a substantial number that are currently poorly served or not at all and who could benefit from such a system at a relatively low cost. Much use is made of computers in the classroom, and this will be probably increasingly the case in years to come. Having one child in a classroom working on different materials from the others for part of the time does not have to be very obvious and lead to exclusion. The child could still be sharing many class activities with their peers and therefore feel included and kept with the age group with which they share the same stages of emotional development.

Based on the Open-University model, so praised by the participants in this study, such a system could provide the stimulation craved by the high IQ child. It could also take away from the teacher the responsibility of providing and marking the extra work undertaken as the teacher would act as a facilitator for that child. The pupils could receive rewards for reaching various levels, similar to those of computer

games, which would keep them engaged and motivated. When ready, they could be entered for national examinations without having to wait for reaching the 'right age'. This would provide the opportunity to study more subjects than the standard number required at GCSE or Advanced Levels, whilst still being kept with the same age group. This would not create timetable problems since most of the material studied would be available on line, to be accessed in times when others are also learning through traditional teaching methods in the class.

7.5.3 An International on line bank of educational materials

Perhaps this could go beyond national borders to deploy the on line bank of materials internationally. WISE, the World Innovation Summit for Education is an international, multi-sectorial platform for creative thinking, debate and purposeful action whose aim it to build the future of education through innovation. It is an ongoing initiative and a global reference in new approaches to education. Through both its annual Summit and a range of continuing programmes it promotes collaboration for building the future of education. It was created as a response to the urgent need to address education in a new way, nurture new approaches, recognise, support successful initiatives and help these initiatives spread and grow. Such an enterprise could provide solutions for the plight of gifted children worldwide.

As this research has demonstrated, it can cost a lot more in the long term, to both individuals and society NOT to cater for the needs of high IQ individuals than it would do to cater for them.

The fact that there are feasible and low cost solutions to help nurture individuals who have the high potential of becoming very productive members of society may be the most important message that should go out to educators, policy-makers and government agencies.

7.6 Conclusion

This chapter considered how the results of the questionnaires and the findings from the interviews complemented and added to the Literature Review Chapter. The combination of these helped understand better the causes and the barriers that there may be to solving the problem of academic underachievement amongst high IQ individuals. It also addressed the problems associated with the reversal of academic underachievement in adulthood and highlighted the potential long-term effects of delayed academic achievement in high IQ adults. The reasons why it is very important to raise awareness of these amongst parents, educators and policy-makers were also explored.

The research suggests using the term 'intellectual neglect' to describe the plight of underachieving high IQ children in schools. It proposes that using such a powerful descriptor could help highlight that the people responsible for children's intellectual development, i.e. educators, have a duty of care and that failing in their duty has as serious long term consequences for the individual as physical or emotional neglect. Examining the issues through the participants' life experiences provided a means of beginning this process in a way that had not been done before.

Whether gifted children should be provided with extra help in the school system or not is still a great source of controversy linked to political agendas and, often, the result of ignorance. Educationalists are divided on the issue and, as a result, do not provide the supportive voice that high IQ individuals and their parents would like to hear or the convincing voice that policy-makers need to hear.

Educating teachers, parents, policy-makers and government agencies about the negative long-term effects of not catering for the special needs of high IQ children may be a way of influencing policy decision on Special Educational Needs in the future and of bringing about legislation that would force measures to be taken. Indeed, raising awareness of the long-term consequences of smoking led the government to ban smoking in all public buildings in order to reduce smoking related diseases and deaths. Without legislation this may never have happened.

Perhaps, lobbying for legislation which would make it compulsory to provide suitable support for high IQ children would be one way of ensuring that a totally avoidable and very unsatisfactory situation is prevented in future. Without this awareness and without lobbying for the needs of high IQ children, it may be difficult for them to ever be included in future SEND or other legislation. Without them being enshrined in legislation, it may be much harder, even impossible, to implement measures in a uniform and concerted manner.

It is hoped that this research will contribute to changing the ways in which the special educational needs of high IQ people are considered. Understanding the long term consequences and the cost of not catering for their needs could help remove, for example, the connotation of advantage and privilege which seems to make politicians and educators hesitant about setting up and implementing a workable system designed to meet the needs of the most able students.

The most important message to be communicated as a result of this research is that there seem to be low cost yet effective solutions to ensure that high IQ individuals become highly productive members of society instead of becoming, in some cases, a burden on resources as a long term effect of their academic underachievement. It proposes as a solution acceleration and enrichment of the curriculum via a national, or even international, on line bank of suitable materials to be accessed on line in the classroom by any child who would benefit from it.

After summarising the lessons learnt from undertaking this research, the next and final chapter draws some conclusions, highlights the limitations of the research and make suggestions for future work.

CHAPTER 8

Conclusion

8 CONCLUSION

8.1 Introduction

The thesis defended in this dissertation challenged the assumption that having a high IQ is both an advantage in the context of academic studies and a positive element for the long-term prospects of individuals who possess such high IQ.

This topic was chosen for investigation as a result of the researcher wanting to understand better her high IQ adult son's difficulties with his experiences of formal education and the long-term effects of these.

It aimed to discover in what ways a high IQ can hinder academic performance and whether there may or may not be long-term effects of academic underachievement on the life trajectories of high IQ individuals.

There were two implicit assumptions at the start of the research process: the first one was that a high IQ and superior cognitive skills may be a hindrance in the school context if no special provision is made for them. This assumption was confirmed as true through both the critical review of the literature and the questionnaires and interviews.

The second assumption was that individuals who have underachieved academically in the school system would be 'saved' by their high IQ once they had left the compulsory education stages. This second assumption was seriously put to the test and partly contradicted by the experiences of the sample studied.

In order to answer the research questions, evidence was sought, first of all, via a critical review of the existing literature on high IQ and its relationship with academic underachievement. This highlighted very well-known causes and cures of this phenomenon. It also revealed that there had been little research so far about the impact of such academic underachievement on the adult life of the individuals concerned.

An understanding of the subject gained through the critical review of the literature was then enlarged by an empirical study. The second part of the investigation, which used a mixed methodology, aimed to fill this gap in the literature via surveys and interviews amongst 158 high IQ adults who perceived to have been academic underachievers. This allowed for both quantitative and qualitative data to be collected and analysed.

Because of the potential difficulty in locating 'qualified' participants, it was decided to work with members of Mensa, the High IQ Society, and it is

acknowledged that this sample may not be representative of all high IQ individuals.

As a result, the findings cannot be generalisable and only apply to the group of individuals who took part in the study. However, within the resources constraints of the study, it is felt that this convenience sample was appropriate and that what was revealed is both a valid and useful, albeit modest, contribution to knowledge.

It is hoped that this research will highlight to educators, policy-makers and government agencies the problems uncovered and also provide the basis for further research of the topic.

8.2 Summary of what the research uncovered

That a high IQ is deemed to be necessary or at least desirable for high-level academic study is well-known. It is often a criterion for selection and admission at selective schools and prestigious universities. Yet, a high IQ does not always result in high academic performance. The discrepancy between the expectations of high performance and the reality is what amounts to academic underachievement.

Literature on the latter spanned several decades of research on the topic and was very comprehensive and wide-ranging. It revealed that the most common

cause for this discrepancy has been identified as an inadequate curriculum which does not take into account the fact that high IQ individuals represent a deviation from the norm and, as such, may have special educational needs. When these special needs are not catered for, it is common for children to find the curriculum so easy as to be confused about the purpose of school, to not learn the meaning of 'work', to not acquiring study skills, all of which can lead to poor performance and disengagement with the process of education. This was confirmed by the responses of the participants in a first questionnaire. Indeed, 35% of the participants had left school at 16 years of age with no qualifications or a few 'O' Levels or G/CSEs. Another 22% had dropped out whilst in the Sixth Form or left school with poor 'A' Levels.

Studies have proven that acceleration and enrichment of the curriculum are a good way of catering for these special educational needs, yet they are not often implemented (Rimm*, 1989; Baum et al., 1995; Reis, 2000; Colangelo et al., 2004; Stoeger 2008). There are many reasons for this: poor identification of high IQ in schoolchildren; the rarity of gifted children; lack of understanding of their special educational needs; fear of elitism; confusing and ever-changing government interventions; and shortage of funds for supporting educational needs, amongst others.

Results from the first questionnaire also revealed that 18.9% of participants felt that their early underachievement had not had any negative effects on their life trajectory. However, most of them had started their working life 40 years ago at a time when academic qualifications were considered less necessary than today; 65 (41%) revealed that they had not recovered from their early academic underachievement and that it had had negative consequences for their adult life; 64 (40.1%) revealed that they were late achievers in that they had not acquired qualifications until adulthood. If those qualifications had been acquired before the age of 35, they had made a positive difference to their life trajectory (32% of the sample), if acquired later, they had not had any positive impact beyond increased self-esteem.

Half of those who had acquired undergraduate degrees as adults revealed that studying by distance learning had been one of the major differences with their school experience and that it had been a very positive one, as it had catered for their independent learning needs. Not having to wait for others to 'catch up' and being able to learn at their own pace were seen as major advantages over what the participants had experienced in the school system.

Interviews carried out with ten late achievers revealed that they came from very varied socio-economic backgrounds and family environments and had attended a variety of types of school. What they all had in common, however were a

negative experience of their education journey - especially at secondary school level -, some personality traits and experiences of poor mental health. They related to those their underachievement and their feeling of 'falling short of potential'.

For the vast majority of the participants in the larger sample of the study, high IQ had not been identified at the time when they were going through the formal education process. Many of them reported personal difficulties such as being confused about who they were, isolation, low self-esteem, fear of failure and mental health issues such as depression. Discovering their high IQ had been a watershed in their life and had had a very positive impact on their self-esteem, if not necessarily on other aspects of their life.

Further investigation of the above issues revealed that there may be a link between what was experienced in school during childhood and adolescence – which could be described as 'intellectual neglect' - and poor mental health in adulthood. This is felt to be the most interesting finding of the study in terms of original contribution to knowledge and one that certainly deserves further research.

Also examined was the potential economic burden placed on society by individuals who, if their educational needs had been catered for, could have contributed much

more positively to the future wealth and health of the nation than they have. The long-term effects on society of the underachievement of high IQ adults were seen to be a divestment of its most precious resources, resulting in substantial economic costs.

8.3 Limitations of the study and platform for future research

The main limitation was the scope of the research in that it was undertaken for the specific purpose of writing a doctoral dissertation. In different circumstances many other aspects could have been explored or the same aspects under a different angle but, for now, they can only remain suggestions for future research, as follows.

For practical reasons, the sample consisted of individuals who are members of British Mensa and who were self-selected. As such, there is likely to be a sample bias which may have resulted in an over-estimate of the emotional difficulties experienced by the participants. Those who had not experienced difficulties may have not volunteered to take part. It is therefore important to note that the investigation applied only to the individuals surveyed and different results may have been obtained with a different sample within or outside Mensa. The reason for choosing this limited sample and its validity was explored in the Methodology Chapter.

Thus, it is acknowledged that undertaking similar research with high IQ individuals who are not members of Mensa would have been interesting and the outcomes may have been different. This was not done because the resources available did not permit to arrange for volunteers to have their IQ formally tested before they could be considered for taking part in the study. This is why a convenience sample had to be used.

In addition, no attempt was made to undertake an in-depth research of the experiences of the 65 (41%) of participants who did not reverse their academic underachievement. In view of the overwhelming sadness expressed in the latter's questionnaires, the 40.2 % who did reverse their achievement were subjectively selected because it was expected that their experience would provide reassurance. Indeed, it was hoped that obtaining qualifications later in life could 'fix' the problems encountered earlier in the education process. It appears from an analysis of the data that this strategy did not work for many of them.

Another limitation of the study was that it overlooked possible differences in academic performance between males and females or variations in cultural or linguistic (i.e. for example non-native English speakers) backgrounds. Because of the nature of the British Mensa membership, this research only focused on participants who were in their vast majority white British nationals, with English as their mother tongue and in their overall proportion more often males than females

(ratio of approximately 60/40%). However, Freeman (2010) suggests that the phenomenon of academic underachievement or late academic achievement amongst high IQ individuals is not confined to the UK or to a particular gender, ethnic or age-group. This was also confirmed by the researcher's own experience of attending and presenting at relevant conferences in the UK and abroad, with multi-national audiences (Favier-Townsend, 2010b; Favier-Townsend, 2010c; Favier-Townsend, 2011; Favier-Townsend, 2014). Although different percentages are quoted in different studies and countries, what seems to be agreed upon by all is that giftedness affects a small minority of people globally and that gifted people, maybe because they represent by definition a deviation from the norm, often experience problems of various levels of intensity throughout their life (Freeman 2005).

Furthermore, whilst differences in the socio-economic backgrounds of the participants were included because a small number of participants perceived them to have been the reasons for their academic underachievement, they were acknowledged rather than examined in any depth. This decision was taken partly because the analysis of the sample data set collected in the final phases of the research suggested that the academic underachievement or delayed academic achievement of high IQ adults occurred in all social classes and different types of schools. Yet, more in-depth studies would be needed to confirm or disprove this as the sample selected for this was small (ten interviewees).

It would also have been useful to compare the experiences of the larger selected sample with that of high IQ individuals who were academically high achievers or high IQ individuals who had not achieved academically but had achieved in non-academic spheres. Furthermore, comparing individuals whose high IQ had been identified at an early age and catered for by the education system or, indeed, not catered for, would have been useful. But, once again, because of the limited resources available this would have been difficult to include within the scope of the study or would have meant considerably reducing the sample size of each group of participants.

In addition, the research did not fully consider the significance of the political context of education in the UK over time. This would also have been very interesting but it was not really feasible to undertake this study as it would have formed the basis for a whole doctoral thesis in itself. The research does acknowledge however, that - whereas some progress has been made over the last 40 years to provide support for students with other learning difficulties or disabilities - little progress seems to have been made to help the plight of underachieving gifted children. Participants in the study reported phenomena that occurred 40 years ago which still occur today. The newly proposed Special Educational Needs and Disability (SEND) Code of Practice due to be implemented from September 2014 is a current example of how priorities for SEND students are affected by the ideologies of the government in

place. Once more, the case of gifted children may not have been considered if they are not believed to have special educational needs. Yet, the Department of Education's definition of SEND includes children 'who have disabilities that make it much more difficult for them in school'. A high IQ does make it difficult to cope with school if special provision is not provided.

A notable segment of further disadvantaged individuals which was not given as much attention as they could have is the group of twice-exceptional students. They are high IQ individuals who suffer from a physical or medical problem or a learning difficulty such as dyslexia, dyspraxia, attention deficit disorder with or without hyperactivity, for example. If only one of the two causes of learning difficulties has been identified there can be misdiagnosis with one element recognised and catered for but not the other. For example, dyslexia may have been diagnosed but, because dyslexic children encounter difficulties with reading and writing, their highly developed cognitive skills may be hidden. Conversely, an individual with a very high IQ can learn to compensate a learning difficulty which then is not diagnosed. If neither has been identified it is likely that the child will be a puzzle to her teachers. This further deviation from the norm (twice-exceptionality) is mentioned in the Literature Review Chapter and in some of the findings but would warrant further research much beyond the scope of this dissertation.

Positive informal feedback was received from psychologists for this research but, anecdotal evidence showed that teachers, although their point of view was not formally sought, were more guarded and seemed to see the research as an attack on their professional skills. Yet, what this study reveals does not question practitioners' professionalism and commitment to their students. Rather it highlights that the problems may lie with a system that does not identify high IQ in the early stages of a child's education and does not provide teachers with the same sort of support for gifted children as it does for children at the other end of the intellectual spectrum. A teacher may only meet a handful of such high IQ children in the course of their career. It may therefore not be feasible for them to provide the curriculum acceleration and enrichment typically needed. In addition, it can be very difficult to cater precisely for all the students in one's care, especially in mixed ability settings. This investigation, although not looking at the point of view of the teachers, because it is again beyond the scope of this dissertation, certainly did not aim to 'blame' them for the underachievement of high IQ children.

In addition, the researcher's own voice expresses the parent's point of view to some extent and participants themselves volunteered information about their parents' lack of awareness of their high IQ or reactions to their underachievement. Although a closely related study, investigating the parent role, which would involve investigating the issues from a very different angle, could be in itself the subject of yet another doctoral dissertation.

The above factors show the rather limited scope of this study. However, at the same time, they point to the fact that the phenomenon of academic underachievement amongst high IQ individuals is multi-faceted and could provide the platform for extensive future research on a substantial number of other aspects relating to this topic.

In any case, the original aims of the research were achieved in that the research questions were answered comprehensively. Therefore, the limitations mentioned above do not detract from the investigation leading to useful conclusions about the sample studied.

These conclusions are important for research in the field of gifted education as they go beyond what has been identified so far in terms of the problems experienced by high IQ individuals when their special needs are not catered for.

Indeed, it highlights that these problems do not stop when they leave the compulsory education system. If anything, they can become increasingly worse.

8.4 The research journey

The conclusions were not what was expected or secretly hoped for but this is what made every step of the journey interesting and worthwhile. Important discoveries

were made on the way with regards to the research questions but, importantly too, the journey was significant for the author of the dissertation in that it enabled her to develop as a researcher. The very personal aspect of this research journey is described in detail in appendix 10.

In particular, sources of bias relating to her emotional involvement with the topic, her assumptions, her prejudices and her own background and experiences had to be gradually eliminated. She had to learn to remain open to alternative explanations and interpretations and to really listen to people who did not agree with her arguments in order to gradually become a more detached observer. In other words she had to learn to 'unlearn' her beliefs so that the results and findings could provide objective, valid and reliable sources of information.

In addition, as a by-product of this research, the author uncovered a number of surprising facts about herself. For example, the discovery of her high IQ a quarter of the way through the project made her reflect on her own life trajectory. This gave the study an added and unexpected dimension.

She realised that she had been a gifted child who had benefited from acceleration. Not having suffered from the potential problems of asynchronous development quoted by the literature, she began questioning the wisdom of such claims. This, combined with her desire to find affordable solutions to cater for the difficulties

encountered by gifted children, and the revelation from the participants that their positive experiences of education second time around derived from distance learning, gave her ideas as to possible ways forward, harnessing the power of on line individualised learning described in Chapter 7.

8.5 Conclusion: Perhaps the end is only the beginning?

What the future holds for the author's very bright son is unknown and she is still very sad that she was not able to help him twenty years ago when the first signs that all was not well appeared. However, she hopes that her modest contribution to new knowledge in the field of gifted underachievement and its long-term consequences will help him and others in some ways.

That he has chosen to study psychology in order to understand how the brain works and to be able to help other people in difficulty is symptomatic. His early academic underachievement may turn out to have positive consequences for many others as well as for him in the long-term.

Undertaking this investigation was motivated by his difficulties in the education system and was the author's introduction to the world of research on the eve of her retirement from a career in university lecturing. It would be quite an unexpected outcome and remarkable story if her findings about the academic underachievement of high IQ adults encouraged her son to take over from her and pursue his own

research in this or another field. In view of his on-going difficulties, this looks uncertain at the moment. However, regardless of what the future holds, what was learnt during this doctoral journey and the process involved in reaching the destination was very meaningful, beneficial and valuable.

The aims of this study were to explore the causes and potential long-term effects of academic underachievement for high IQ individuals. If anything were found, then it was hoped that disseminating the findings might help raise awareness amongst educators, policy-makers and government agencies of the issues at stake.

The research found, in particular, a potential link between what could be termed 'intellectual neglect' in childhood and adolescence and mental ill health in adulthood. These problems appear to be preventable yet, when no action is taken, they result in a very high cost to both the individuals concerned and society.

Indeed, by not nurturing the great intellectual curiosity, originality of thought, high levels of creativity and great mental energy of high IQ individuals, society is divesting its most precious human resource.

Identifying, nurturing and providing the right opportunities for these individuals can only be good for economic, scientific and societal development and should therefore be a priority for every government.

GLOSSARY

GLOSSARY OF TERMS AS USED IN THE CONTEXT OF THIS DISSERTATION

Academic achievement: also referred to as academic performance, commonly measured by public examinations set a level deemed to be appropriate for a particular category of individuals. An individual student's performance on a standardised test will be compared to the performance of a group of students who took the test under equivalent circumstances at another time and place (a “normative” measure).

Academic underachievement: It is acknowledged that the concept of underachievement is contentious. For the purpose of this research, the term academic underachievement relates only to the discrepancy between an individual's index of cognitive ability (as measured by an IQ score) and their performance in public examinations i.e. the discrepancy between actual and expected potential performance.

CATs: Cognitive Abilities Tests sometimes used in British school to stream students.

Delayed academic achievement: Academic qualifications obtained at a later age than the 'norm' for a particular set of individuals in a particular context.

ECH Plan: Education, Health and Care plan to be introduced in UK schools in September 2014 and to replace statements of educational needs.

Gifted: Term commonly used for individuals whose performance is deemed to be very superior to the average. In this dissertation, the term only applies to individuals whose IQ score is in the 98th percentile.

IQ: Intelligence Quotient.

Late academic achievement: Alternative term for delayed academic achievement.

Mensa: An International Society for High IQ individuals.

Mensans: Members of Mensa who all have an IQ score in the 98th percentile (top 2% of the population).

Mainstream school: A school which is for all pupils, not just those with special educational needs. A mainstream school is usually a maintained school, although it could also be an independent school.

OFSTED: Office for Standards in Education Children's services and skills – a government body.

Open University or O.U: Offers flexible part-time study, supported distance and open learning for undergraduate and postgraduate courses and qualifications. Most of undergraduate courses have no formal entry requirements as 'the qualifications students have when they leave are the only ones that matter'.

SAT: Scholastic Assessment Test, used for admission to Ivy league American Universities – very similar to an IQ test.

SATs: Standard Assessment Tests used in British schools to monitor students' progress.

SEN: Special Educational Needs: Pupils have special educational needs if they have learning difficulties that need special educational provision. They have learning difficulties if they find it much harder to learn than most pupils of the same age or they have disabilities that make it much more difficult for them in school.

Statement of Special Educational Needs: A document that sets out a child's needs and all the extra help they should receive.

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APPENDICES

Appendix 1 – Ethics Consent Form

FACULTY OF HUMANITIES, LAW and EDUCATION

Application for approval of a study programme involving human informants

Applicant: Anne Favier-Townsend
Date: 13 July 2009
Name of supervisor Dr Jenny Plastow, Professor Alan Davies

Title of study programme: The journey into adulthood of individuals whose academic performance is at odds with their very high IQ

Protocol no 08/09/7

Dear Anne

I am pleased to confirm that your application for the above study programme has been circulated to the members of the Faculty Ethics Committee and approved with an investigation end date of 31 August 2011*.

If this investigation is ongoing as at 31 August 2011 we would like to remind you that it must come back to the Faculty Ethics Committee for extended approval. I will contact you nearer the time asking you to confirm whether or not the investigation has been completed.

Kind regards

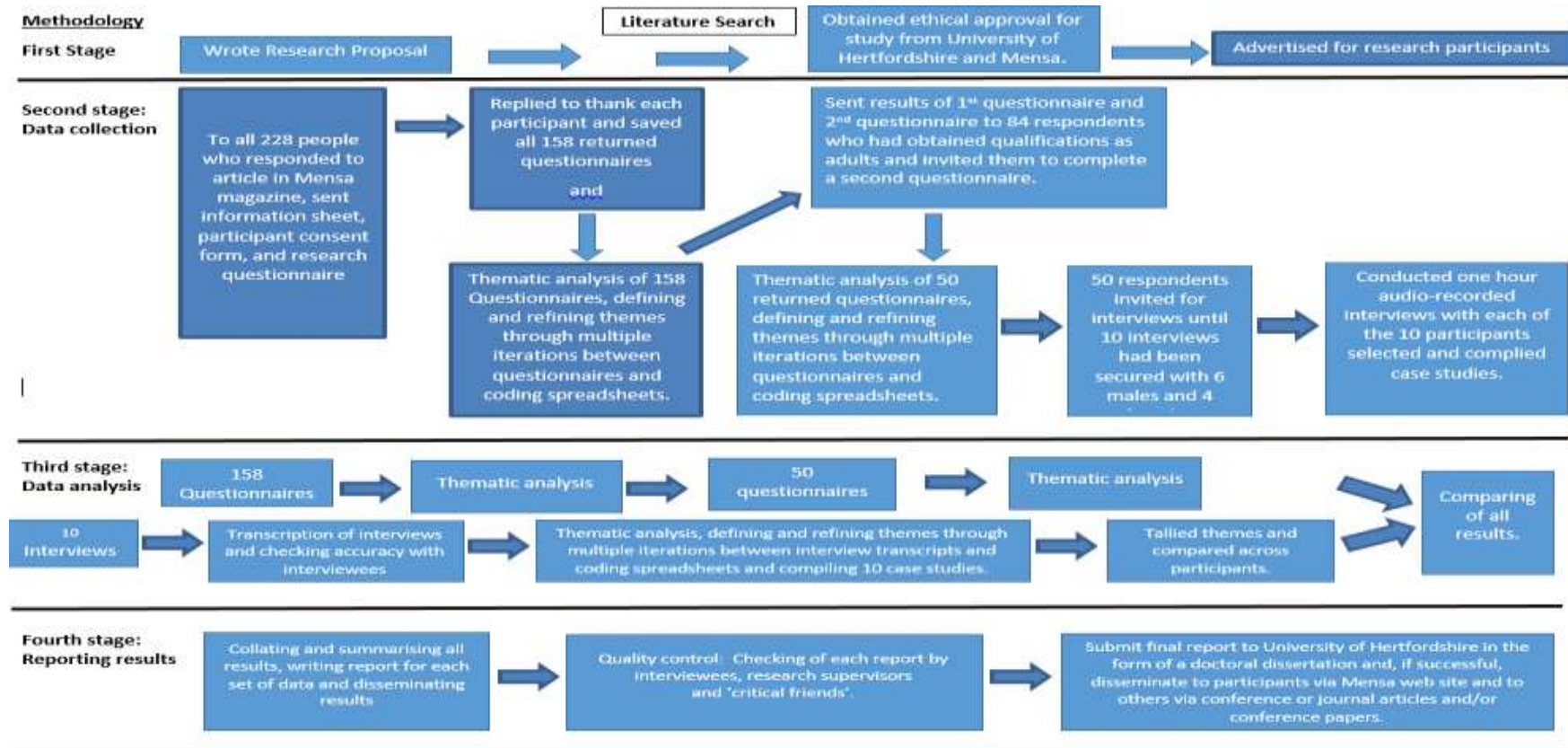
Rachel Cox

Senior Administrator (Academic Quality)

R.L.Cox@herts.ac.uk

* Note: this was subsequently extended due to suspension of studies

Appendix 2 – Flowchart of Research Design



Appendix 3 - First Questionnaire

SURVEY: Very high IQ, poor academic performance and impact on adult life
Invitation to participate in a research project

As part of the preliminary research for my PhD with the School of Education at the University of Hertfordshire, I wish to interview individuals who have a very high IQ (98th percentile) and whose academic performance is (or was at some point) at odds with what could be expected of someone with such high level cognitive skills. Anyone who feels that they fit the above description is invited to participate in this study.

My ultimate aim is to find out the impact, if any, that such academic ‘underachievement’ has had on the adult life of high IQ individuals.

If you agree to take part, please answer the 10 open ended questions seeking your personal view on a number of statements relating to your experience. It is expected that it will take about 30 minutes to complete the questionnaire.

You will be asked to provide some personal details relevant to the study such as age, academic qualifications and occupation but all data provided will remain confidential. Unless you choose to give your name, for example, if you want to receive a personal copy of the report on the outcomes of the study, your responses will be anonymous as all participants will be allocated a number which identifies them only to me as the researcher. In addition, they will be used only for the purposes of the study.

I acknowledge that talking about underachievement could be upsetting. Participation in the study is, therefore, entirely voluntary and you may skip some questions and/or may withdraw from the research at any point without explanation if you do not wish to continue. You will also have the opportunity to ask any questions before and/or after you have completed the questionnaire (see contact details below).

Please return you completed questionnaire to:

Anne Favier-Townsend, by email to a.favier-townsend@herts.ac.uk or by post to Anne Favier-Townsend, Room M237, De Havilland campus, University of Hertfordshire, HATFIELD AL10 9AB

You can also use the email and/or contact number below should any queries or concerns arising from taking part in this survey (Tel: 01707 285557).

1. I hereby give my consent to take part in the following research investigation with the full understanding that I may withdraw at any time without giving any reason.
2. If I later withdraw from the study, any data that I have submitted will also be withdrawn at my request.
3. I understand that the information that I will submit will be confidential, and used only for this study.

4. I have received, read and understood information explaining what the study entails and what will be expected from me.
5. I understand that I am not being tested and that there are no right or wrong answers to the questions.
6. I understand that it will be possible for me to have access to the results of the survey when it is completed.

Participant No Surname (optional)..... Gender

Signature Date

This study has been approved by the University of Hertfordshire's Faculty of Humanities Law and Education Ethics Committee. Registration Protocol No 08/09/7

SURVEY: Very high IQ, poor academic performance and impact on adult life - Interview questions

Question 1

In what way(s) do you feel you have 'underachieved' academically? Give examples.

Question 2

Are you aware of any of the reasons for this 'underachievement'? If so, what do you perceive them to be?

Question 3

At what age and why did you join Mensa? What benefits (if any) do you get from being a member?

Question 4

Did you have any academic or professional ambitions when you were younger? If so, what were they? If you did not have any, why not?

Question 5

If you had some, have these ambitions been achieved? Whether yes or no, to what extent and in what ways?

Question 6

Do you feel that your academic performance has had an impact on your adult life? In what way(s)? Positive? Negative?

Question 7

Would you say that you have 'bounced back' from your earlier academic 'underachievement'? In what way(s) and at what stage in your life?

Question 8

If it were possible to start your life all over again, what things, if any, would you like to happen differently in relation to your academic performance?

Question 9

To what extent has your underachievement been a cause of anger or sadness in your life? If so, who/what are you angry with/sad about?

Question 10

If you had to give 4 adjectives to describe your personality, what would they be?

Appendix 4 – Second Questionnaire

SURVEY: Very high IQ, poor early academic performance and later reversal of underachievement - Invitation to participate in a research project

As part of the preliminary research for my PhD with the School of Education at the University of Hertfordshire, I wish to seek the views of individuals who have a very high IQ (98th percentile or more) and whose academic performance was at some point at odds with what could be expected of someone with such high level cognitive skills but who have subsequently managed to reverse this academic underachievement.

My aim is to get a better understanding of the factors that caused academic underachievement in the first place and of those that were instrumental in reversing this underachievement or overcoming it in one way or another.

If you agree to take part, please answer the 10 open ended questions seeking your personal view on a number of statements relating to your experience. It is expected that it will take about 30 minutes to complete the questionnaire.

You will be asked to provide some personal details relevant to the study such as age, academic qualifications and occupation but all data provided will remain confidential. Unless you choose to give your name, for example, if you want to receive a personal copy of the report on the outcomes of the study, your responses will be anonymous as all participants will be allocated a number which identifies them only to me as the researcher. In addition, they will be used only for the purposes of the study.

I acknowledge that talking about underachievement could be upsetting. Participation in the study is, therefore, entirely voluntary and you may skip some questions and/or may withdraw from the research at any point without explanation if you do not wish to continue. You will also have the opportunity to ask any questions before and/or after you have completed the questionnaire (see contact details below).

Please return you completed questionnaire to:

Anne Favier-Townsend, by email to a.favier-townsend@herts.ac.uk or by post to Anne Favier-Townsend, Room M237, De Havilland campus, University of Hertfordshire, HATFIELD AL10 9AB

You can also use the email and/or contact number below should any queries or concerns arise from taking part in this survey (Tel: 07903 946278).

1. I hereby give my consent to take part in the following research investigation with the full understanding that I may withdraw at any time without giving any reason.
2. If I later withdraw from the study, any data that I have submitted will also be withdrawn at my request.
3. I understand that the information that I will submit will be confidential, and used only for this study.
4. I have received, read and understood information explaining what the study entails and what will be expected from me.
5. I understand that I am not being tested and that there are no right or wrong answers to the questions.
6. I understand that it will be possible for me to have access to the results of the survey when it is completed.

Participant No (leave blank) Surname (optional).....Gender

Year of birth Current occupation.....

Signature Date

This study has been approved by the University of Hertfordshire's Faculty of Humanities Law and Education Ethics Committee. Registration Protocol No 08/09/7

SURVEY: Very high IQ, poor early academic performance and later reversal of underachievement

If you are not posting this electronically, please be kind enough to answer the questions on our own piece of paper, labelling your answers 1,2 ,3 etc and return to Anne Favier-Townsend, Room M237, De Havilland campus, University of Hertfordshire, HATFIELD AL10 9AB. Thank you very much.

Question 1

In what way(s) do you feel you 'underachieved' academically? State the highest academic qualification you obtained prior to embarking on 'reversing' your academic underachievement and the qualification(s) you subsequently obtained which indicate reversal of academic underachievement.

Question 2

What do you perceive the reasons for this early underachievement to be?

Question 3

At what age did you start reversing this academic underachievement and how old were you when you obtained (subsequent) academic qualifications?

Question 4

Can you identify the reasons or circumstances that gave you the motivation to embark on this reversal? If so, what do you perceive them to be?

Questions 5

Can you identify the factors that made it possible for this reversal to take place? If so, what were they?

Questions 6

Can you identify what was different 2nd/3rd time around, if anything, from the time(s) when you originally underachieved?

Question 7

With hindsight, in what ways if any, do you feel that your earlier underachievement was affected by particular personality traits? If so, what were they, why and how were they a hindrance?

Question 8

In what ways, if any, do you feel that your very high IQ was an important factor in either your underachievement or/and the subsequent reversal of your academic underachievement?

Question 9

What sort of help, if any, did or could the education system provide to facilitate reversal of academic underachievement in later life amongst high IQ individuals?

Question 10

In what ways, if any, did acquiring late academic qualifications enhance your life? Do you wish things had been different e.g. that this reversal had happened sooner and why?

Are you single, married, in a relationship, divorced/separated or widowed?

If you have children, how well are they doing/have they done academically and why?

Appendix 5 - Text of Email Sent to Late Achievers on 9/08/2010

Dear Mensan

This email should be read in conjunction with the other email sent virtually at the same time as this one.

I am now starting the second phase of this research project which aims to understand how and why Mensans who had been academic underachievers in their primary, secondary or/and higher education managed to reverse their academic underachievement by rejoining and succeeding in the education system at some point later in their life.

According to the details that you sent me previously you figure amongst those who should be able to make a very useful contribution to this phase of the research project.

I have therefore attached another questionnaire for you to complete in your own time and I hope that this will prove of sufficient interest for you to commit the half hour or so that it will take you to do this. At first glance it looks similar to the first one but it is not.

I understand that you have many have more interesting or pressing things to do but there is no rush (within the next 4 weeks would be good). Your previous participation was so helpful that I would really appreciate a little more of your time if you can spare it.

I am grateful for your cooperation with this.

Best wishes

Anne

Anne Favier-Townsend
Principal Lecturer
Room M237
De Havilland Campus
University of Hertfordshire
HATFIELD
Herts

Appendix 6 - Text of Email Sent to Potential Interview Participants on 11/07/12

Dear Mensan

About two years ago you very kindly volunteered to participate in a research project on the subject of 'delayed academic achievement in high IQ individuals' and I am very grateful to you for the very rich data you provided. I had to suspend my PhD studies due to bereavement and then illness but I am now fit again and ready to resume my research. I hope that, despite this long delay, you are still interested in participating in my study of high IQ adults who were once 'underachievers' at school but who acquired academic qualifications later in life.

I have attached for your perusal a (draft) snapshot of the results of the questionnaire No 2 which you completed in the summer/autumn of 2010 or spring of 2011. The full results and analysis of these results will be available later this year.

What I would like to do now is compile some personal profiles which will require one-to-one interviews. For this I need to randomly select 10 individuals - 4 females and 6 males of various ages as a proportional representation of the total sample. The content of the interviews will be strictly confidential and any data published as a result of them will be totally anonymous (see data protection statement below).

Before I can proceed with this 3rd phase of my research I therefore need to find out if you would be willing to take part in an in-depth one-to-one interview with me, lasting up to two hours, on Thursday 30th August, Friday 31st August or Saturday 1st September and, if these dates are not convenient, which dates in the following 2 weeks or another later date might suit you better.

If you can come to the [University of Hertfordshire in Hatfield](#) (de Havilland campus), which will make it much more efficient for me in terms of the time it will take to carry out those interviews, your 2nd class public transport or car travel costs will be reimbursed. However, if it is not possible for you to come to Hatfield, I will arrange to come and visit you at a location of your choice, or to interview you in London, on the phone or via Skype, in late August/early September, preferably.

If participating in such an interview is of interest to you I would be grateful if you could complete **by 18th July, preferably**, the attached 'participants availability form' and let me have any other comment

you wish to make. As I will have limited access to email between 19th July and 22nd August it will take me longer to reply to you between those dates and a late reply will delay any confirmation and travel arrangements that you or I will need to make, hence the request for a quick response.

Once I have received your replies I will put all the names and relevant details in a hat and pull 10 out at random. If you are not selected, it will simply mean that you were not amongst the ten pulled out of the hat.

I hope that you do not mind my contacting you after such a long time and then giving you a very short deadline for a response to my request. Trying to complete this research at the same time as holding a full-time job and coping with various setbacks is proving a little challenging!

I hope that you are well and I look forward to hearing back from you in the very near future.

Anne Favier-Townsend
Principal Lecturer
University of Hertfordshire
HATFIELD
Herts
AL10 9AB
a.favier-townsend@herts.ac.uk

Appendix 7 - Interviews schedule August/September 2012

NAME	AGE	GENDER	DATE	TIME	TRANSPORT
Interviewee No 1	62	M	Wednesday 29/08 in Hatfield	12.00 PM	Travelling by car from Birmingham
Interviewee No 2	57	M	Wednesday 29/08 in Hatfield	2.30 PM	Travelling by car from Nottingham via WGC (business meeting)
Interviewee No 3	59	F	Thursday 30/08 in Hatfield	11.00 AM	Travelling by car from Lincolnshire Staying in St Albans overnight
Interviewee No 4	61	M	Thursday 30/08 in Hatfield	1.15 PM	Travelling by train from Bristol arriving Hatfield 12.27 leaving at 15.25
Interviewee No 5	54	M	Thursday 30/08 in Hatfield	3.30 PM	Travelling by car from Hertford/East Herts
Interviewee No 6	70	M	Friday 31/08 in Hatfield	11.00 AM	Travelling by train from Croydon. Staying overnight at Travelodge Knows campus
Interviewee No 7	49	M	Saturday 1/09 in Hatfield	12.00 PM	Travelling by car from London
Interviewee No 8	56	F	Tuesday 4/09 In Derby	11.45 AM	Travelling by train from Crewe
Interviewee No 9	41	F	Tuesday 4/09 In Derby	1.15 PM	Travelling by car from Derbyshire
Interviewee No 10	54	F	Tuesday 18/09 In London	11.00 AM	At her place of work

Appendix 8 - Interview Protocol

- Mention that I will not use the word intelligence but always refer to high IQ
- Explain the format and that the interview will last one hour
- Explain my relationship with Mensa

First 10 minutes: Clarification of socio-economic background as a child, family context, type of school attended, level of academic underachievement and subsequent reversal.

Next 40-45 minutes: 4 semi-structured questions

1. Can you tell me what you remember of your experiences of the various stages of your formal education?
2. Can you tell me of any external factors or personality traits and ways of thinking that could have had an influence on your academic underachievement?
3. Can you tell what you think are your main personality traits, ways of thinking and general behaviour and relationship with other people? What do you most dislike and what do you most value?
4. In what ways, if any, do you think your high IQ and/or academic underachievement and/or late academic achievement have affected your life so far?

Last 5-minutes: Thoughts on an open university-style education for schoolchildren or any other suggestions to improve high IQ children's experience of education

Many participants have said that they are independent learners, interested in many subjects and able to assimilate concepts much more quickly than the than average person. Reversal of

academic achievement for many was effected through distance learning i.e. a vehicle such as the Open University. I would therefore like to find out your thoughts on a national 'Open School' equivalent, available on line to all schools in the country so that bright pupils could work through the curriculum at their own pace in some or all subjects and progress according to their ability in the subject rather than to their age/peer group. This would be whilst being part of a wider school community of children with whom they would mix for some subjects or other activities.

- What do you think of this concept?
- What would be the advantages and drawbacks?
- Would it have worked for you? Why/Why not?

Appendix 9 - Highest qualifications obtained

Of the 158 respondents, 64 mentioned having reversed their academic underachievement in adulthood as shown below. 50 of those subsequently participated in the second phase of the study and completed the second questionnaire. Below are details of the qualifications they obtained first and second time around.

I Left school with no qualifications of any kind

4 out of 50

Higher academic qualifications subsequently obtained and at what age:

- 3 O Levels in mid-twenties. Nursing degree at 45
- 5 O levels in early thirties, 1 A Level in late thirties + BA at 42
- BA at 40 + BSc at 50 (both with OU)
- BA 1st Class in thirties - PhD in fifties

I obtained only a few GCSEs or equivalent

19 out of 50

Higher academic qualifications subsequently obtained and at what age:

- BA 1st Class at 29 and Msc with Distinction at 32
- BA 1st Class at 30 (OU) and MA at 32
- BA 1st Class at 30 (OU)
- BA Hons at 32 (OU)
- BA Hons at 36 (OU)
- BA Hons late twenties (OU)
- BA Hons (OU)
- BA HONS 2.1 + chartered Institute of Insurance and Pensions Mgt PG Diploma
- BA Hons at 43 (OU) + currently studying for an MSc
- BA (Hons) at 45 (OU) + MA at 48
- BA Hons in mid-twenties + MSc in late-forties

- BSc Land Management (28)
- BSc in forties (OU)
- HNC at 20 + BA at 26 + PGCE
- HND at 21 + BA at 23
- Certificate of Education at 45
- Chartered Certified Accountant at 36
- Advanced Music qualifications (FCVM + Grade 8 Music Theory) in forties
- Final Diploma of Institute of Marketing at 42

I obtained good GCSEs or equivalent but subsequently did poorly (poor A level grades or dropped out)

18 out of 50

Higher academic qualifications subsequently obtained and at what age:

- HNC at 23 + BA at 28 + MSc with distinction at 49
- HND at 23 + BSc (OU) in fifties
- HND at 25 + BA Hons (OU) in fifties
- HNC at 21 + BA Hons at 46 (OU)
- BA Hons in thirties (OU) + Msc in forties
- BA (Ordinary) (OU) at 30
- BA (2.1) at 25
- BA (2.1) at 36 (OU)
- BA Hons at 32 (2.2) (OU)
- BA in late twenties (OU) + MA in late thirties
- BEd at 32
- BEd at 34
- BA (Hons) at 32 (OU) + PGCE at 34
- Certificate in Education
- Professional Accounting Qualifications early thirties
- MSc in mid thirties
- MBA in mid-forties + currently studying for PhD (mid-fifties)
- PGCE in late twenties + Masters in Linguistics at 53

I achieved good grades at 'A' level or equivalent but did not pursue academic career

5 out of 50

Higher academic qualifications subsequently obtained and at what age:

- 'Only' PGCE despite A grades at A level – wrongly 'advised' – no other qualifications since
- Did not go to university but subsequently obtained a Masters with Distinction (early thirties)
- Did not go to university but subsequently obtained an MBA (late twenties)
- Did not go to university but obtained an MBA (early thirties)
- Did not go to university but subsequently obtained Advanced Nursing qualifications (late twenties)

I failed at university or dropped out before the end of the course

8 out of 50

Higher academic qualifications subsequently obtained and at what age:

- BSC 1st Class at 29
- BA 1st Class at 32 (OU)
- BA (OU) at 33 + MEng at 57
- BA (OU) at 35 PhD in early forties
- MBA at 34
- Further Education teaching certificate at 43
- Professional qualifications (Accounting) in early thirties
- Professional qualifications (Computer programming) in mid thirties
- Professional qualifications (Marketing) in mid thirties

I obtained a low classification degree

4 out of 50

Higher academic qualifications subsequently obtained and at what age:

- BA 1st Class at 32
- BSc 1st class at 33 (OU)
- Masters with distinction in mid thirties
- BSc (Hons) in late twenties + MSc in mid-thirties + PhD at 48

I studied for a post graduate qualification but either failed, dropped out or feel it was still not in keeping with real potential

6 out of 50

Higher academic qualifications subsequently obtained and at what age:

- MA at 25 + various other professional qualifications but still feels that underachieved
- 2 MAs + speaks four languages but still feels that has underachieved
- Started a Masters with OU but did not complete
- Started an MSc but did not complete
- Failed PhD
- Obtained MPhil instead of PhD

Appendix 10 - Reflecting on a very personal doctoral journey

It has been very challenging to complete a doctorate whilst working full-time in a demanding role as a Principal Lecturer and programme leader and trying to maintain some form of family life. In addition, because of a number of external events, the journey was far from smooth. I originally registered for a Doctorate in Education, but as I refined my research question, it became apparent that my study was better suited for a PhD and I therefore had to apply for a transfer. Soon after the transfer was effected, my principal supervisor became ill and, very sadly and unexpectedly passed away a few months later. Without her, my second supervisor felt that he wasn't qualified enough to be able to guide me. A new supervising team had to be appointed which, fortunately, happened fairly quickly. However, it naturally took a little while for us to get to know each other and to work together, especially as the above-mentioned changes had created a certain amount of anxiety on my part. My mother then became ill and eventually passed away and I had to suspend my studies for six months. I had barely returned to my studies that I was signed off sick for another four months due to occupational stress and 'burnout' and had to suspend my PhD studies again for another four months.

Yet, despite the fact that the journey was fraught with difficulties and that I would have had many reasons for giving up my doctoral studies, I surprised myself for never once remotely considering doing so and for still completing on time. I guess that the constant

yet discreet support I received from my husband, my profound interest in the topic, my personal and emotional involvement in it, unexpectedly discovering my high IQ (see below) and the fact that my supervisors and participants were willing me on provided the combination of factors that kept me going.

Evolution of the research question over five years

When I started this investigation, I was in a state of emotional distress over my son's difficulties and desperate to find solutions to his problems. Deep down and subconsciously, I was hoping that my research would prove that he had been 'let down' by the education system and reveal that many high IQ individuals who underachieve in the school system end up doing very well in life. I just wanted to find out, by hearing from others like him, how they had overcome their earlier difficulties.

The original title of the research proposal was: "The journey into adulthood of individuals whose academic performance is or was at odds with their very high IQ."

I was angry with my son for not making the most of his abilities, with his teachers, his father and with family and friends who could not see beyond the 'lazy child' and who thought he would be fine as he was 'so clever'. I was especially angry with myself, for not having prevented his predicament in the first place. Although all of this caused me

a lot of distress, I was quietly hoping that everything would get gradually better and come right in the end. This is probably what I wanted my research to confirm and this blurred my vision at the start of the study.

However, reading the literature on underachieving gifted children, meeting high IQ adults who had underachieved academically as children and simply talking to a wide variety of people such as friends who knew about my research and from presenting my early results at conferences (Favier-Townsend, 2010b; Favier-Townsend, 2010c; Favier-Townsend, 2011) made me question my assumptions from very early on in the research process.

Indeed, I gradually became very disappointed and further distressed by what I was finding: 41% of respondents had never reversed their underachievement, academically or otherwise and most were leading unhappy lives, with quite a substantial number reporting difficulties due to poor job prospects, resulting not infrequently in mental health issues. For example, some participants reported excessive alcohol consumption, eating disorders and marital issues as well as depression, as a result of their underachievement. These confirmed situations highlighted by Kerr and Cohn, (2001), Kerr and Kupius (2004) and Kanazawa and Hellberg (2010).

For the sake of my sanity, I increasingly felt the need to leave aside the above-mentioned group, at least temporarily, and to concentrate on the 64 (40.1%) who had reversed their academic underachievement as adults. I had decided by then that I would focus on *academic* achievement and therefore would not investigate in depth the circumstances of the 18.9% of the sample who had declared that they were happy not to have academic qualifications. In this respect, it could be said that I deliberately re-oriented the study to suit my own academic background and interests and my personal needs. Perhaps I could not face the reality of the first results of the investigation.

The focus therefore shifted from academic underachievement to delayed academic achievement, probably in the hope that this would make my conclusions more optimistic. Yet, this hope was only partly fulfilled as some of the late achievers revealed that, despite reversing their underachievement in adulthood, the impact of their earlier underachievement was still felt negatively. Uncovering this made me even more determined to explore further the long-term consequences for high IQ individuals of their educational needs not being met.

This was exacerbated by finding out, a quarter of the way through this investigation, that I had been a gifted child whose educational needs had been mostly catered for – a totally unexpected development. The Mensa Research Officer who expressed an interest in my study persuaded me to take the Mensa test on the basis that my son

must have inherited his IQ from at least one of his parents. I had always assumed that it must be from his father - who, I am sure also has a very high IQ - but I eventually summoned the courage to sit the test, in total secrecy, like most of the participants in the study. Like them, I was amazed when I passed it. This new development had advantages in that it boosted my confidence about studying for a PhD (just as finding out their high IQ had boosted the participants' self-esteem) and enabled me to join Mensa and, therefore, to have much greater access to its activities and members.

However, it also had some perverse effects because it made me reflect on my own academic journey, which up till then, I had never questioned. Through talking to my mother not long before she died, I discovered that when I started compulsory schooling I could already read fluently. As a result, I had been moved to the form above that of my age group almost immediately. As I was born at the end of August, this meant that I was two years younger than my peers for the whole of my schooling. In other words I was treated as a gifted child should be (i.e. accelerated through the process as my 'mental age' was above that of my peers) without any fuss being made about it by either my parents or teachers. However, the consequence was that, although my academic achievement must have been much higher than that children of my own age, it was only average compared with the children/teenagers in my class who were all two years older than me. For this reason I never thought of myself as a gifted child.

I have since become very puzzled as to why acceleration is not an automatic process for pupils who are displaying abilities which are significantly beyond that of their peers. This is a very personal view but I believe that claims which, because of their asynchronous development, gifted children who are accelerated through the education process are in danger of suffering emotionally (Lovecky, 1992; Colangelo et al., 2004; Daniels and Piechowski, 2009; Jones, 2013) need in my opinion to be further investigated or should at least be tested on an individual basis. In view of the participants and my son's negative experiences of being 'kept back' with their age group, I believe that acceleration would have been a very good way of handling their learning differences. Maybe, this way, they would not have been able to rest on their laurels and would have had to work hard to keep up with the syllabus. The Literature Review suggests, indeed, that the best way to help gifted children is to provide acceleration of the syllabus and enrichment of the experience through greater in depth study of subjects (Adda* and Catrou*, 2003; Colangelo et al., 2004; Gross, 2004; Siaud-Facchin*, 2008).

The discovery of my high IQ made me a little angry that no one had ever suggested that I would be capable of doctoral studies, for example, and disappointed that I had never realised this myself. On my parents' suggestion I had qualified as a bilingual secretary after obtaining my first degree and worked as a secretary for two years but hated every minute of it. I was not sure why and felt some sense of failure when I

resigned, unable to settle in the job, having 'wasted' all the money my parents had invested in my getting this qualification. I did acquire subsequently several post graduate qualifications, re-trained as and became a lecturer and have very much enjoyed my working life since. Yet, this research made me reflect on what I may have missed out in terms of career. If someone had told me when I was younger that I had a very high IQ, I might have had more confidence in my abilities. Although a high IQ is no guarantee of success for doctoral studies since they are probably more about diligence than intelligence, I may have set my educational sights higher and studied for a PhD in my twenties rather than in my fifties. I could have had a career as a researcher rather than as a lecturer. Alternatively, as a lecturer, I may have had more credibility and promotion prospects with a doctorate than without one.

In other words, because of the above, I began to identify in some ways with some of the participants' experience – something of which I had to be very mindful.

In fact, to some extent, studying for this PhD and uncovering the above, acted as a form of therapy which enabled me to see the issues at stake more clearly. It also had unexpected consequences on my relationship with my son. Before and when I embarked on this study we were at loggerheads. When I mentioned in passing that I was undertaking this research, he expressed at best no interest in it and at worst anger that I should use his experiences for a research project. Three years later he was

returning to university to study for a BSc in Psychology, had developed an interest in my topic and was providing very useful insights in all the issues raised by the study.

Having discovered that, like him, I have an IQ in the 98th percentile explains in some ways why I did not identify it in my own son since we must function on a similar cognitive level. I did not think anything of how fluently and eloquently he spoke at an early age (in English and French) or how he had taught himself to read fluently by the age of four. Most parents around me thought that their own children were 'very clever' when, compared with him, I did not think they particularly were. I therefore assumed that this was how all parents felt about their offspring. His average school performance partly confirmed this. Had I known that I had a high IQ and that intelligence is inherited, I may have realised that my son was indeed exceptional instead of wondering if it was a figment of my imagination.

The late realisation that we had a similarly high IQ provided common ground at a time when we did not have much and was instrumental in improving our understanding of each other and facilitating better communication between us.

It is therefore quite clear that, because of the above, my role as researcher and the various sources of bias inherent to the topic studied could not but help influence the research design in several ways. My passion for the subject was both a blessing and a

course. It enabled me to remain focused on my doctoral studies in difficult circumstances but it made being impartial quite challenging.

Sources of Bias

As Mowles (2011) posits, from a social and pragmatic perspective, who we are is socially formed and we can't stand outside ourselves. The mind, the self and societal processes are all interconnected and it is difficult to be detached observers who leave prejudices and values at the door.

Indeed, subjectivity exists throughout the choices I made: choice of sample, methods chosen, questions asked and interpretation of answers. Firstly, the overriding factor at the start of this investigation was a very strong emotional involvement with the topic. I felt a great sense of guilt for not having questioned more the advice of well-meaning people (teachers, family and friends) when the first signs of my son's difficulties had appeared. This had contributed to my very bright son reaching the stage he had and, in some ways, I had a great need to assuage this guilt. Although not necessarily aware of it at the time, I had a need for something or someone other than me to blame for his situation. I also needed hope for the future.

Secondly, my own educational experience and my reflecting on it with hindsight, as previously mentioned, also had an influence on my interpretation of events. Although I have lived in the UK for over thirty years, I am French and experienced and am familiar with a different education system from my son's. My lack of familiarity with the British school system may have prevented me from assessing the situation adequately. My way of thinking about the process of education was also influenced by the reading and selection of the literature. Indeed, some of the research carried out in France on the subject was highly relevant and sometimes provided different insights from the Anglophone literature.

Finally, when growing up, my father was a teacher who then became a headmaster and it was drilled into me from a young age that teachers knew best and were not to be argued with. When teachers suggested to me repeatedly that the 'problem' was with my son rather than the school curriculum or the teachers, I half-believed it.

However, I only half-believed it and it is the half of me that did not quite believe it that eventually led me to undertake this study.

Through sharing research results and findings as my doctoral journey unfolded, I became very aware of the above sources of bias and I therefore attempted to attenuate them as much as I could. In order to do this I strove to remain open to the possibility of

contrary findings and kept checking with supervisors and critical friends whether there were alternative explanations and interpretations. This enabled me to become aware of my prejudices, to question my beliefs and assumptions and to become gradually more objective in my assessment of the data. I realised how important it was to really listen to people who did not agree with my arguments rather than lull myself into a false sense of security by only hearing what I wanted to hear. The process of negating and being negated by others not agreeing with my arguments was constant throughout the research process and my thinking changed because of theirs. Becoming an increasingly detached observer made it possible to reach the ultimate end: to provide as objective an account as possible of the discoveries made through what the participants in the study revealed in the lengthy questionnaires they completed and the interviews in which they took part.

Because so much was uncovered in this process and because I kept coming up against insights that were not part of my original assumptions, I realised that I had to clearly state the limits and the scope of the study as mentioned briefly in Chapter One and reiterated in Chapter Eight.

00Appendix 11 - Comparative Personal Profiles of Interviewees

	Interviewee No 1 Male (62)	Interviewee No 2 Male (57)	Interviewee No 3 Female (59)	Interviewee No 4 Male (61)	Interviewee No 5 Male (54)	Interviewee No 6 Male (70)	Interviewee No 7 Male (49)	Interviewee No 8 Female (56)	Interviewee No 9 Female (43)	Interviewee No 10 Female (56)
Socio economic background as a child	Educated/ Professional Middle Class	Lower Middle class.	Lower Middle class.	Lower Middle Class.	Middle Class.	Working Class.	Working Class.	Educated/ Professional Middle class.	Working Class.	Educated/ Professional Middle class.
IQ score and age at which discovered	148 (49) Believed to be inherited from his father	155 (40) Not sure from whom inherited high IQ.	150 (36) Not sure from whom inherited high IQ.	156 (35) Believed to be inherited from his mother.	150 (43) Believed to be inherited from his father	155 (26) Believed to be inherited from his mother.	148 (23) Believed to be inherited from his father.	145 (41) Believed to be inherited from her father.	143 (18) Not sure from whom inherited high IQ.	145 (46) Not sure from whom inherited high IQ
Family background	Very happy, loving, and supportive home environment.	Very unhappy/toxic family environment.	Sporty family, not particularly supportive of non-sporty child or demonstrative.	Happy environment. Was an only child, mixing mostly with interesting adults.	Stable and happy overall but mother suffered from postnatal depression and participant feels that this may have had an impact on family life.	Fairly unhappy family background. Parents eventually divorced when he was 23.	Stable, loving home environment.	Stable and caring – if not very demonstrative - home environment.	Stable, loving home environment.	Idyllic family circumstances until father's death when 11. Problematic thereafter due to mother's emotional and financial difficulties as well as unsupportive aunt.

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	Interviewee No 1 <u>Male (62)</u>	Interviewee No 2 <u>Male (57)</u>	Interviewee No 3 <u>Female (59)</u>	Interviewee No 4 <u>Male (61)</u>	Interviewee No 5 <u>Male (54)</u>	Interviewee No 6 <u>Male (70)</u>	Interviewee No 7 <u>Male (49)</u>	Interviewee No 8 <u>Female (56)</u>	Interviewee No 9 <u>Female (43)</u>	Interviewee No 10 <u>Female (56)</u>
Supportive of academic achievement or not	Very supportive of academic achievement.	Parents both went to grammar school but not particularly supportive of academic achievement.	More supportive of sporting than academic achievement.	Not supportive of academic achievement.	Supportive of academic achievement.	Not supportive of academic achievement.	Not supportive of academic achievement.	Very supportive of academic achievement.	Not supportive of academic achievement.	Very supportive of academic achievement.
Academic Qualifications	5 mediocre 'O' levels and 2 poor 'A' levels. HND at 23. BSc at 56 and BA at 59.	5 poor 'O' levels (left school at 16). HND at 23. Feels he has been very successful without higher qualifications.	10 average 'O' Levels'. 3 poor 'A' Levels. BA (2.1) from Polytechnic. 2 MA's + other qualifications.	9 Good 'O' Levels. 4 average 'A' Levels. Left university after 1 st year. FE teaching certificate at 44.	One 'O' Level and 8 GCSES (Left school at 16). 'A' Levels at 20-22. BSc at 32 (1 st). BSc at 46. MSc at 49.	5 'O' levels. (Left school at 16). 1 'A' Level at 26. BA (1 st) at 30.	4 'O' Levels. (Left school at 16). BSc at 32 (1 st). MSc at 33.	6 average 'O' Levels and 3 CSEs. (Left school at 16). Cert Ed and other teaching qualifications in 40s/50s.	9 (unexpectedly good) 'O' Levels. (Left school at 16). 3 'A' Levels at 22-26. BSc at 29.	2 'O' Levels. (Left school at 16). BSc at 48 (1 st). MSc at 49. PhD at 54.

Appendices

	Interviewee No 1 Male (62)	Interviewee No 2 Male (57)	Interviewee No 3 Female (59)	Interviewee No 4 Male (61)	Interviewee No 5 Male (54)	Interviewee No 6 Male (70)	Interviewee No 7 Male (49)	Interviewee No 8 Female (56)	Interviewee No 9 Female (43)	Interviewee No 10 Female (56)
Primary Education	Good local primary school. Star pupil. Loved school. Passed 11 +.	Poor local primary schools. Disliked school intensely. Failed 11 + on purpose as rebellion against father.	Good local primary school. Very good pupil and desperate to learn but very bored. All strengths ignored even when passed 11+ with very high score.	Local 'nothing special' primary school. Utterly bored and completely at odds with other pupils. Hated school from day one. Passed 11+ effortlessly.	Good local primary school. Star pupil. Loved school. Did not have to work hard. Passed 11+.	A succession of schools due to father's job. Despite disruptions/frequent moves, mostly top of the class until about the age of 10. Passed 11 +.	'Poor' local inner city school. Hated school from day one and 'school hated him'.	Good private primary school. Found everything easy and just kept her head down so as not to attract attention. Passed 11 +.	Local 'nothing special' primary schools. Loved school, and always wanted to contribute. Was a good pupil and usually top of the class.	Very good private school. Loved it, top of the class but had to leave at 11 because of father's death.
Secondary Education	Good local Grammar School. Too easy, bored, did not learn to learn. Hid ability by being class clown in order to be accepted. Slow decline.	Poor local secondary school. Felt different in a negative way and was bullied. Was bored and had no motivation.	Good local Grammar School. Work too slow. Very bored. Felt her intellect was being crushed. Hiding ability as not cool to be clever. Slow decline.	Good Local Grammar School. Went through the motions but very bored. Good grades and place at university gave no sense of achievement.	Good Local Grammar School. Did not know how to study and began to find things difficult. Became the class clown to fit in. Slow decline,	Good Local Grammar School. Doing very well but 'messed about' to try and be popular. Expelled. Sent to a private school. Did not settle.	Large inner city comprehensive School. Just went through the motions. Bored and disaffected.	Good Catholic Grammar School. Bored and mostly disengaged but passed enough to be allowed in the 6 th Form where she floundered due to lack of study skills.	Good grammar School. For some unknown reason, which nobody questioned, she was placed in the bottom set. Lost all interest and motivation for school.	Large inner city comprehensive. Complete shock. Bullied by teachers and pupils for being clever and 'posh'. Became very withdrawn.

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	Interviewee No 1 <u>Male (62)</u>	Interviewee No 2 <u>Male (57)</u>	Interviewee No 3 <u>Female (59)</u>	Interviewee No 4 <u>Male (61)</u>	Interviewee No 5 <u>Male (54)</u>	Interviewee No 6 <u>Male (70)</u>	Interviewee No 7 <u>Male (49)</u>	Interviewee No 8 <u>Female (56)</u>	Interviewee No 9 <u>Female (43)</u>	Interviewee No 10 <u>Female (56)</u>
Higher Education	Open University in his 50s. Really enjoyed it. Degrees obtained to prove himself rather than for professional advancement.	Feels that he has 'no need' for higher qualifications. Proud of being self-taught in many areas. Yet envies his children's academic achievements.	2.1 BA from Polytechnic at 21. PGCE at 27. MA at 54 + various other qualifications (music, languages, and art) part-time and distance learning. Loves studying and learning.	Left university in first year as bored and 'could not see the point' of it. Returned at 44 to do a teaching qualification. Still disliked the process of obtaining qualifications.	Returned to education in 20s, 30s, and 40s, most of which part-time and distance learning, which he loved.	Returned to education in late 20s and was admitted to university on the basis of an aptitude test. BA in Philosophy (1 st) at 30. Loved it. Attempted PhD but gave up due to conflict with supervisor.	Returned to education in late 20s. HND, BA (1st Class). MSc. Some part-time and distance learning. Loved it.	Various teaching qualifications in her 40s/50s. All enjoyable. Realised that she did not know how to study and sought help, with successful outcomes.	'A' Levels part-time from age 22 onwards. Degree at 28. Loved every minute of it. Many varied professional qualifications since.	Admitted to university on the basis of an aptitude test despite low qualifications. Loved it. BSc at 48 (1 st). MSc at 49. PhD at 54.
Professional life until current occupation	Successful career in IT but, despite being very competent, always felt inferior due to lack of degree.	Slow to start and many mishaps but eventually successful career.	Unable to have a career due to husband's job and frequent moves around the world but has enjoyed her very varied life.	First worked in R and D in ceramics, then became Technical Manager. Retrained and worked for 18 years as a	A number of menial jobs, then once passed degree, Chemical Analyst. As a result of undergoing therapy decided to study psychology,	Ten years of menial jobs before degree. Then computer programmer and Quality Assurance Manager for 19 years. Left to	Ten years of 'menial' jobs prior to degree.	Career in administration and middle management.	10 years or so of waitressing, office, and sales assistants jobs before going to University.	Filing clerk for 2 years, travel consultant for 10 years, Business Partner for 11 years.

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				Systems Analyst (none of which were stimulating) before retraining as an FE Lecturer.	then forensic psychology which gradually led him to his current job.	retrain as a Hypnotherapist.				
Occupation now	Retired.	Public Speaker and Writer of - mostly business and self-help - books (17 books translated into 16 languages.)	Part-Time EFL teacher (a very 'portable' occupation) that suits her situation.	FE lecturer. Teaching photography. Particularly enjoys teaching students with disabilities.	Youth Justice Practitioner.	Retired.	Systems Analyst since obtaining Master's degree.	FE Lecturer (literacy/ and life skills for disadvantaged students and prisoners/ probationers).	Public Speaker and Coach.	Psychology Lecturer.
Family status now	In long-term relationship after divorce. Intellectual mismatch in both cases. Is close to his two (privately	Happily married for 30 years so far and good family life. Is close to his two (privately educated and academically	Happily married for 36 years so far with man of similar IQ. No children by choice – because of frequent moves	Single. Various long-term relationships but too independent and self-absorbed to commit. No children	In long-term relationship after divorce. No children – would have loved them but is not sure he would have been	Happily married for 30 years with a researcher PhD graduate. No children by choice. Wanted some originally but when asked	Happily married. No children by choice. Did not want to inflict on his offspring what he had been subjected to.	First marriage failed due to intellectual and social class mismatch. Happy second marriage with man of similar IQ.	Happily married. No children yet but is hoping have some in the future.	Widowed after 30 years of very happy marriage. 2 children - one son very successful academically and one 22 year old daughter who

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	educated and academically successful) children.	successful) children (MSc and PhD).	but also out of fear of reproducing her own unhappy childhood.	because they did not fit in his life trajectory but also because he would not want them to suffer the way he did.	able to make them happy and may have smothered them.	to explain why, he could not find an answer and neither could his wife. Neither felt that their own childhood had been particularly happy. Postponed and, in the end 'never got around to it'.	Still does not quite know how he fits in the world – what chance does he have to guide children?	No children by choice - because of circumstances but also because she feels she would not be a good mother: 'children are too messy'.		struggled at school but is now doing well at university.
Personality traits as perceived by participants	Witty and sociable but finds it difficult to cope with 'small talk'. Only really interested in intellectually challenging	Creative, inquisitive, energetic, and good at multi-tasking. Anti-conformist, likes complexity and hates	Very creative, independent and self-sufficient. Permanently very active brain and wide range of interests. Easily bored.	Creative, inquisitive, self-sufficient, anarchic, happy to be different. Many areas of interest and expertise, mostly	Easily bored but very driven when motivated. Perfectionist and self-critical. Does not suffer fools gladly. Highly sensitive	Imaginative, idealistic and contentious. Deep and complex thinking process and wide range of interests.	Complex thinking process that others cannot always follow. Easily bored and in need of intellectual stimulation.	Always has a lot going on in her head. Gets bored and needs intellectual stimulation and variety. Does not suffer	Inquisitive. Gets bored easily and loves learning new things all the time. Has changed directions professionally	Very sensitive and emotional. Although she knows she is very capable she still suffers a lot from self-doubt.

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	<p>subjects and cannot cope with boredom. Very driven if the goal seems worthwhile, otherwise gives up easily. Perfectionist – rarely feels that he is good enough. Still can't believe IQ score and feels like an impostor. Many acquaintances but few people he would call real friends.</p>	<p>superficiality and rigid structures. Very driven if the goal seems worthwhile, yet very self-critical and often doubting his abilities. Many acquaintances but only three real friends, all unconventional individuals.</p>	<p>Dislikes making 'small talk', yet has learnt to do so because of her role as Senior RAF officer's wife. Very self-critical. Persistent fear of failure despite all late achievements, yet very driven to always achieve more. Many acquaintances due to life-style but her only true friend is her husband.</p>	<p>self-taught. Brusque with people who cannot keep up with his reasoning. Perfectionist who always doubts his competence. Prefers the company of females as does not share typical male interests such as sport.</p>	<p>and cries easily. Finds intimate relationships difficult but charismatic and popular with friends and colleagues. Has two good male friends of similar intelligence with whom he can relate well.</p>	<p>Highly sensitive and cries easily. Very independent. Has a few friends but his wife is his 'anchor'.</p>	<p>Changes jobs every 2-3 years. Perfectionist. Very determined when interested in something he sees as worthwhile. Very sensitive. Has acquaintances and is quite sociable but still feels like an outsider and is very much a loner. His wife of 18 years is his best friend.</p>	<p>fools gladly. Expects a lot of herself. Very independent. Very driven when the goal is meaningful and very apathetic when it is not. Self-effacing, organised, efficient, tidy. Has acquaintances but does not have many close friends apart from her high IQ husband.</p>	<p>several times, including working abroad. Likes meeting Mensans as they have many varied interests and are more open minded than most. Perfectionist (rarely feels that she is good enough). Very independent. Very sensitive.</p>	
Values and attitudes	Hates cruelty, unfairness,	Always supports the cause of the	Reacts strongly and emotionally	Hates corruption, inequality,	Intense reactions to cruelty and	Hates cruelty - both to animals	Hates the unfairness and	Wants to help other people have	Her role as motivational	Having suffered grief and been

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	<p>hidden agendas, and political correctness. Found it difficult to accept his various employers' practices which he considered unethical or unfair. Gave up work to care for his mother when she became ill.</p>	<p>'underdog'. Engaged in volunteer work with disadvantaged and excluded individuals.</p>	<p>to upsetting events in the News. Hates cruelty, especially to animals and disadvantaged individuals.</p>	<p>injustice, nepotism, institutions and irrationality. Always writing a letter to MPs. Teaches youngsters with learning difficulties and always tries to find better ways of helping them.</p>	<p>inequity (he feels his job is about reducing inequality). Left his job as a Chemical Analyst because he was unhappy with the organisation's hypocrisy and poor ethics. Now works with young offenders and tries to help them lead better lives.</p>	<p>and people - oppression and inequity. Left high status, well paid job because very disillusioned with the unprofessional ways of the company he was working with (e.g. corruption and unethical practices). As long as he can remember he has always wanted to help others.</p>	<p>inequity of chances based on the social class one is born into.</p>	<p>a better life. Wants to give back what she was lucky to find, finally: the enjoyment of learning, qualifications, and the self-confidence they bring. Is non-judgemental about the past of the disadvantaged people she teaches. Just wants to help them cope and give them hope.</p>	<p>speaker is to help others become more self-confident.</p>	<p>bullied as a child she has a lot of empathy for people experiencing difficulties, hence her choice of psychology for her late career.</p>

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Self-esteem and Mental health	Rarely feels he can be totally himself and still feels insecure at times. Was bullied at work because of his unwelcome high levels of competence not matched by qualifications. Resigned as was on the point of nervous breakdown.	Very poor self-esteem as a child. Close to breakdown at 49. More confident now after 3 ½ years of therapy to stop himself 'self-destructing'. Still not sure that he knows himself.	Believes that her experiences of school made her feel stressed and anxious. This led her to suffer from OCD in adolescence and become increasingly introverted. Reached a very low point at 39 which is when she took the Mensa test. Still suffers from anxiety which she relieves by acquiring more qualifications. Describes	Forced to be somebody he is not in order to fit in, causing some distress, especially in his younger years.	Had a mid-life crisis in his thirties and verged on becoming and alcoholic. Had therapy which eventually led him to study Psychology, then Forensic Psychology and change his career. Still feels psychologically fragile but feels that he has overcome his early underachievement and has now	No mention of any mental health related problems.	Was bullied at school for being different. Was taken to see a psychiatrist at the age of 9 to see 'what was wrong with him'. Was not tested for IQ. Was declared 'normal'. As a Systems Analyst he tries to see in the minds of the people who wrote the programmes – i.e. he feels like a psychiatrist. Had he failed	Poor treatment from managers (who either dismissed her for not having any qualifications or felt threatened by her competence) led to bullying at work. This resulted in a nervous breakdown in her early forties. Still finds it difficult to understand where she belongs.	Has had counselling at various points and is still trying to understand who she really is.	Several years of therapy in her thirties in an attempt to get over her low self-esteem and feelings of failure and despair. Still work in progress – still easily doubts her abilities.

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			herself as an education 'junkie'.		'over-achieved' academically- maybe to compensate for his negative early school experiences.		when he went back to study he believes he may have committed suicide. Alcohol abuse in adulthood.			

Appendix 12 – Appeal in Mensa magazine of November 2009

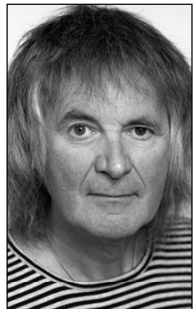
Ian's marvellous musical mix

Mensa musician Ian Stewart has a mixed set of influences... from Baroque to new wave rock, via music of the Mediterranean to early Seventies psychedelia. It is, he freely admits, an unusually eclectic collection of sounds. They don't always appear together in any one set of music but we found some of those wide-ranging influences on a brilliant new CD by the London-based member who was brought up in Malta and Scotland.

Ian sent us his compositions, *San Gejtanu*, performed by the Alrissimo Ensemble for review purposes.

The fact is that we have hardly had the CD out of our Apple Mac sound system...

It's a stunning collection which ranges from the gently lilting to the fiercely passionate. Not being musical experts, we turned to a fine review from *Clarinet and Saxophone* magazine to get some technical



details. "San Gejtanu is a four movement work that was written to feature the playing of saxophonist Kyle Horch. It is full of Mediterranean colour, scored for soprano saxophone, six violins and two violas," the review tells us.

Technical material aside, we can say that it is a hugely enjoyable CD which we would recommend to members who like highly distinctive and unusual music.

As to Ian himself, he is a classically trained pianist and composer and also played trombone in the Scottish Youth Brass Band and the San Gejtanu Band in Hamrun, Malta.

He has performed on electric keyboards, laptop, turntables, accordion and bass guitar – so not surprisingly he has worked and composed in most styles of music, including, classical, electronica, new wave and jazz.

He has also appeared in concerts, radio and television shows around the world.

If you want to find out more about Ian's work (and hear snippets from *San Gejtanu*) then visit his website at <http://www.surfforms.co.uk> or <http://www.music-chamber.com>

Can you help research into intelligent underachievement?

Anne Favier-Townsend on how her son's own experiences prompted her to ask if education is failing some of our brightest young people

If I had a dollar, pound or, even better in the current economic context, a euro, for every time that well-meaning people have said to me over the years about my (now 23-year-old) son "don't worry, he is so clever, he will always be all right", I would be very rich by now.

Alas, I am not very rich nor is my son all right. He is, indeed, still extremely bright, still very knowledgeable about and interested in a very wide range of topics, still has huge potential, and is a lovely lad – but years of needs unmet by the school and university curricula mean that he has gradually given up on the formal education process, seems to have lost all intrinsic motivation to do well academically or professionally and, after years of feeling somewhat a failure, has no idea what path to follow next.

My sadness at seeing how he was so let down by the education system and how I, a trained and very experienced educationalist, did not manage to prevent this situation, has led me to read a great deal on the subject of the underachievement of gifted individuals. So much so that I am now undertaking research within the framework of a PhD in order to



■ PLEA: Anne Favier-Townsend

find out how individuals like my son manage or not to 'bounce back' from earlier underachievement. I am hoping that this will help me find solutions to help him and many others like him.

Since fellow Mensans have in common an IQ in the 98th percentile or higher – an accepted measure of high academic potential – but come 'from all walks of life', one can suppose that they will have had a wide variety of educational and professional experiences and may have developed certain personality traits as a result of them. This is why I would like to learn from Mensans who consider that they did not do as well at school/university as they should have, how their adult life has panned out and why. If you would you like to contribute to this research, please express your interest by providing

me with your contact details – surname or first name or both, address or town/region of residence and/or phone number, e-mail address, gender, age, highest academic qualification and age at which it was obtained, current occupation – so that I can build a database of potential participants. I will then get in touch with you either in the summer or early autumn.

Please contact me, preferably by email (a.favier-townsend@herts.ac.uk). Alternatively, you can leave a text or voice message on 07903 946278 or write to me: Anne Favier-Townsend, Principal Lecturer, University of Hertfordshire, Room M237, de Havilland Campus, Hatfield, Herts, AL10 9AB.

I am very grateful to any Mensan who is willing to participate in a future survey, focus group or one-to-one interview (one or two or all three, you will decide). It should not be too onerous of your time but each and everyone's contribution will provide me with useful data.

All the information gathered will be anonymous so as to protect confidentiality and findings will be published only with the agreement of the participants.

Mensa Anne Favier-Townsend is a Principal Lecturer at the University of Hertfordshire and a Fellow of the Higher Education Academy



■ FREE MARKET: Madsen Pirie

Exciting line-up of speakers

The line-up of speakers for this year's Mensa at Cambridge weekend has been finalised – and there are some superb talks and discussions in store for what is Mensa's premier intellectual event. There is still time to join in and enjoy this year's new venue, the wonderful, historic, Sidney Sussex College, taking place between August 20 – 24. The College, which is a new venue for this year's weekend, as we have made a switch from

Magdalene College which we used in the past, has the atmosphere of a historic college but also has modern en-suite bedroom facilities. What's more there is a new lower price structure – you can book the whole weekend, including accommodation for £575 or you can attend individual sessions over the weekend. For further information and a booking form go to www.mensa.org.uk or call Diane Salter on 01902 772771. ◀

Appendix 13 – Articles about the experiences of gifted children today (5 Pages)

WRITE ON... visit the NEW forum to directly comment on articles in Mensa Magazine at www.mensa.org.uk

School life: The good, the bad and the downright ugly

Mensa Magazine's September issue carried a special report asking if the state school system was failing gifted children. Here is a selection of members' views following that report...

I am 13 and still undergoing education in the State system. My experiences are extremely similar to the ones written about in the Gifted Children special issue. Schools do not help people like me and I feel like I am treading water in most of my classes. High school, especially, has been quite a problem. At the start of my first year, it was clearly indicated in my primary school reports that I was working at a much higher level than other children my age. On being put into my first classes, I was given material that I had passed some time before. At this point we had not yet been grouped into classes according to ability and found it understandable that the school would still need to grade the other children, so we said nothing and I spent several months re-doing material that I had passed in Primary 5. When we got classed according to ability, nothing changed. I perfectly understood the fact that other children do not learn things as

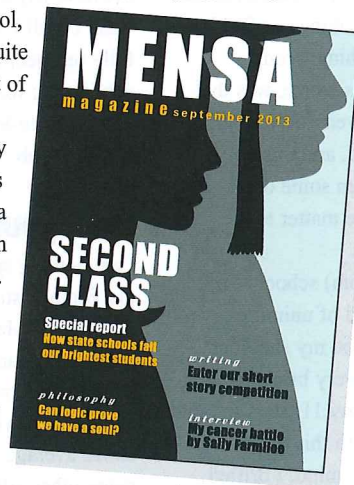
quickly as me, but failed to see why that meant that I had to redo work I found easy, and rather boring. How difficult could it be to just give me a different textbook, and let me work away quietly in a corner? I was progressing onto extension material

in almost every lesson, so why could I not just be given it at the start? It would save a lot of time.

At one Parents Meeting, one of my teachers told my mother that I looked bored in classes, and did not seem to listen to explanations.

This was because I was bored! Other teachers were not so bad, saying they knew I was beyond the level they were teaching the class, but were simply not allowed to give more complex material. I have just gone into third year and the work has become harder.

Continued on page 16



Write On! A new forum for debate...

By Brian Page
Editor, Mensa Magazine

This month we are carrying something of a Feedback special on the important issue of how state schools deal with gifted and talented children. There were a lot of responses to the special report in the September issue. Some of them were simply too lengthy to carry on the Feedback pages. Which is where our new Write On forum section on the British Mensa website comes into its own. Dedicated to topics raised in Mensa Magazine, this forum allows you to post longer views than we can publish in the Magazine (although even here you should be aware that the longer your articles the less chance you have of people reading them!)

The Write On link also allows you to instantly comment on articles and carry on a running debate online.

From next month letters to Feedback may also be made available on the website – if you don't want your letter used on the web you need to let the editor know.

The Write On forum is in the members only section of the website at www.mensa.org.uk. If you don't know your username and password or don't have one then e-mail the office at: www.membership@mensa.org.uk

Letters to Feedback should be addressed to: Brian Page, Editor, Feedback, Mensa Magazine, 21 Princess Road, Strensall, York, YO32 5UE.
E-mail: B.Page@btinternet.com (Include your name and address at the bottom of your message. Please state if you do not wish your full address to be published). Please keep submissions as brief as possible. Letters may be subjected to editing at editor's discretion.

I am working at a more reasonable level, but in some classes I am still yawning, looking out of the window and getting 100 per cent test scores despite that. I do extra class work at home in the hopes that I may be moved up a level for sheer lack of material, but frequently get into trouble for doing so. Our curriculum claims that it lets children of all abilities to work as much as they can, but this is not true. It is brilliant for those who either cannot (which I don't have a problem with, but these children should be helped more, and placed in different classes) or simply will not apply themselves to work. I'm the last person to be mean to someone because they cannot do something, I simply don't understand why I need to act like I cannot do it as well. I just want to know what kind of school system not only refuses to acknowledge gifted pupils (there are several more in my year who also complain about this) but do all they can to slow their progress.

Lina Murray

Saved by Mensa

I write as one of those failed by the State at school. My experience was that not only was my academic potential never identified by my schools, leaving me under-stimulated and bored a lot of the time, but that in some instances 'the system' actually seemed to conspire to hold me back. In primary school I was streamed into a remedial class, because my teachers thought I was struggling at or below average. However, at this time, back in the late 1960s I was an avid reader of Marvel and DC (superhero) magazines. Rather than nurture my early love of reading, my parents were told by the school to stop me

doing so, as reading such material could be 'detrimental to his learning', or words to this effect. (In actual fact, many of the concepts covered and the level of language used in such magazines required a higher level of comprehension than someone of my young years, then, perhaps, on average, would have been expected to master.)

In secondary school, much the same thing happened. In the school library I wanted to read the popular book *Born Free* but it was located in a section deemed too advanced for me to read. I asked my teacher politely if I might be allowed to borrow this book, instead of one from the junior level. With a critical look on his face he quizzed me, making me feel like I was doing something wrong.

What made things worse, was that from the second year to the fourth year I was bullied, and this only came to light when some other pupils brought the matter to the school's attention.

I left (escaped from) school at age 16, with a handful of unimpressive CSEs and a chip on my shoulder about 'not being very bright' (based on the results of my 11 years in State schools). And, with this (erroneous) belief fixed in my mind, I drifted through different jobs, achieving management positions, based on my results at work, but simultaneously remaining largely unfulfilled.

It wasn't until the late 1980s or early 1990s that I chanced upon a Mensa puzzle published in a newspaper, which I noticed I could complete quite easily. That inspired me to take a home test and then a supervised test, in 1993. That resulted in me being offered membership in Mensa and then my life changed markedly for the better. This event was a true

watershed moment in my life. I then began to re-evaluate things and think deeply about what I'd really like to do with the rest of my life. I enrolled in a range of Higher Education courses, qualifying as a Counsellor/Cognitive Behavioural Therapist (CBT), Clinical Hypnotherapist and Neuro Linguistic Programming (NLP) Master Practitioner.

The turnaround in my life has been vast and remarkable. And Mensa has played a very significant role indeed in enabling me (Mensa is an enabling organisation) to do so. Were it not for Mensa, it's anyone's guess what I would be doing in my life now. My one sadness is that it wasn't until I was about 32 that I fully realised my potential so debilitating were the effects of my time in State-led 'education'.

Kerin Webb

Do it yourself

I am nothing special. I am a 21 year old Biology student. I believe that gaining my Mensa membership at an older age meant I had the maturity level to understand and deal with it. I realised that while I might have an above average intelligence there are many other gifts people possess and I am nothing extraordinary. It then angers me when I read articles in Mensa Magazine berating state schools for not supporting its brightest pupils – and it doesn't anger me in the way you might expect. I strongly believe a high intelligence is a tool to achieve, it is not a free pass, and as with any tool you have to work with it to reach your goals. Many highly intelligent people fail not because the school system failed them but because they refused to work.

WRITE ON... visit the NEW forum to directly comment on articles in Mensa Magazine at www.mensa.org.uk

My school is brilliant!

I attend a large state school in Nottinghamshire with about 1,300 pupils. I am starting year 11 in September and I want to share my opinion of State schools. I feel that as long as you have the determination to succeed, you will do very well. I am very ambitious and strive to achieve my goals. I am very happy in my school and have many friends there. However, nothing comes before my studies and everybody knows that. My teachers set us high goals and help us to achieve them. Our classes are streamlined so we have few disruptions (which are quickly dealt with). I love my working environment and wouldn't change my daily routine. I relax with my friends at break times like a normal teenager, but get stuck in when it comes to studying. No school is perfect and I have heard a lot of bad things about private and grammar schools because I have friends

at both types of school and speak to them quite often. I have found out that State schools are working at a higher standard than private and grammar schools, and are supporting and setting higher goals for their students too.

I knew about Mensa but never really thought about taking the test. It was not until a teacher in my school had arranged for the 'gifted and talented' people who wanted to take it to be able to do so. I sat the test at school when I was 12 and was thrilled when I found out I was offered a membership. The results got sent to our school and I opened mine with my friend and that particular teacher. My point is, the state school I go to organised this and I wouldn't be a member if it wasn't for them.

Emilia Dobb

My experience of school as a whole is indifferent. I neither loathed nor loved it; however I respect my (state) school for supplying me with my (free) education that enabled me to move on to university and a step closer to my future career. Some of my teachers encouraged my ability and to the rest I was simply another face in a class. Mostly I found school work easy and I was quite often bored yet I was in a class with 20 others who did not necessarily find the work as easy as me. Out of respect for my peers I didn't channel this boredom into misbehaviour, instead I would use my spare time to help my friends with work. Helping my friends allowed me to practise the skills needed to successfully teach others and this in part led to me gaining my first job as a music teacher at a local rock school. Something I may not have achieved had I acted like the world revolved around only me. There are gifts in this world other than cleverness. In my technical

classes I was consistently and superbly horrendous. With hammer in hand I exquisitely bashed out an untold number of failed spice racks and garden troughs, much to the disdain of my teacher. I looked on enviously at my much more talented counterparts wishing that I too could have a miniature screwdriver set instead of a burnt hand and misshapen lumps of metal for my efforts (true story). I am a capable drawer but my artwork paled in comparison to a few of my much more artistic friends; yet I appreciated that my teacher pushed and encouraged all of the class rather than the proficient few. These are just two examples of the innumerable qualities that people can exhibit. Just because we have high IQs doesn't mean we are entitled to special treatment throughout life. I think it is almost laughable that intelligent people, perfectly capable of the work set in front of them, demand the attention of educational forces. To me it is like the higher classes complaining to the

lower classes that they have too much money. We all start somewhere and we should be grateful that we are allowed an easier start than others. If state schools are to be reformed it should be for the benefit of everyone, not just the gifted.

Kate Louise Fraser

Going private

My son was 20 last December. He lasted two and a half years in the state system. The Reception teacher thought he had learning difficulties because he wouldn't try reading the picture books (no words) at the start of the year. Six months later he was freely reading Roald Dahl. The next year he had a fantastic teacher who recognised his abilities. He was, by six, able to do long multiplication and division in his head (try having a two year old that parks toy cars in Fibonacci sequences) and could easily add/subtract six-figure numbers. The following year his year was amalgamated with the year below.

Disaster. The ability range in the class was over six years. He became unhappy, his behaviour deteriorated and the teacher couldn't cope. Things came to a head and I walked him into the local private school. They immediately put him up a year (he was capable of more but not socially). There they were able to do extension work for his better subjects. He got A* in everything except English (A) at GCSE, and straight A* in five A Levels.

He and another boy with similar abilities ended up at Oxford in the same college and on the Maths course. (Try negotiating the Uni fees system when the banks won't give accounts unless you are 18!) Both got scholarships at the end of the year and both are doing summer research work at Oxford prior to starting Masters.

I am a Mensa member and went through the comprehensive system just after abolishment of Grammars in the 1970s so was quite sensitive to inadequate provision for bright kids. I wasn't prepared for my son to have the same struggles and frustrations so we went private. It was undoubt-

edly the best move for him and it is a disgrace that the State system has not learnt to nurture and provide for our brightest pupils. We were lucky enough to be able to afford the fees. My parents were not and I went through hell. Our two younger children have been private from the word go.

Claire Roberts

A different take

I felt compelled to write in response to the article Must do better. My only knowledge on the topic comes largely from my own experiences but it is rather what the article failed to mention, rather than what it did say, that I really find concerning – specifically, ensuring there is support and advice available for the more able pupils who decide that university is not for them, but instead prefer to enter the workplace after A Levels with the potential to continue studying part-time to assist career progression or purely for academic satisfaction.

At the local sixth form college I attended there was a single-minded emphasis on applying to university

(and indeed I'm sickened to this day to recall my form teacher telling me that if I didn't go to university I would end up in a 'dead-end job') without the slightest attempt to inform pupils that alternative routes are available, which can equally lead to a career as a qualified professional, if that is what one wants. The college wrote to my parents at the end of the first year of the course suggesting that I should be encouraged to apply to Oxbridge. After finally getting the message that I really had no intention of applying to university, they thereafter made no attempt whatsoever to assist me with planning for the future in any way. Perhaps with a bit of support it might not then have taken me a whole year of being made to feel a failure before I started out in the workplace. I hope that attitudes are slightly more informed some years down the line but somehow I suspect not; just as well that the internet at least makes researching alternative routes easier nowadays, with good dedicated sites such as [notgoingtouni](http://notgoingtouni.com).

Kathryn Thelwell

Why not become a school governor?

Your critique of education for talented children included experience, comment and proposals from teachers, Ofsted, parents, headteachers, politicians and consultants – but not school governors. Having been a serial governor for many years, I would recommend that Mensa members who want to make a difference consider joining a school governing body. Although you will be an unpaid volunteer, you can have real influence in the school's direction and strategies –

through the governing body's relationship with the head-teacher. As a parent, you are likely to have the opportunity of being elected, but if not your local authority should have lists of governor vacancies for community governors. If you are a member of a political party, you may be able to be appointed by the local authority. You might do some homework on league tables and Ofsted reports and then seek a place on a less successful school. There is a tendency for the

schools which are performing less well to also find it more difficult to fill governor vacancies – you might find yourself in a key role in the body at an early stage, particularly if you have specialist skills or experience. At times it can be frustrating, there is usually a lot of paperwork, acronyms, policies, and things can seem to move tediously slowly at times. But if you are not afraid to ask questions and challenge – while supporting your school – and

keep a focus on improving the school for the children, it can be very rewarding. For me, as well as the desire to see gifted children have the best possible opportunities, the injustice that just 16 per cent of children on free school meals go to university, while 96 per cent of those from private schools do, drives me to do what I can to reduce social and economic disadvantage in education. I hope other Mensa members will become school governors.

Tom Tomkins

WRITE ON... visit the NEW forum to directly comment on articles in Mensa Magazine at www.mensa.org.uk

What about older folk?

Regarding your Special Report article: Without entering the debate in general about ranking primary school pupils in ten per cent bands, I do think it is vitally important that the brightest children are identified as such right from day one and their progress tracked, so that necessary interventions can be rapidly made. Leaving it until secondary school before tracking progress is leaving it far too late.

Secondly, it is vitally important for schools to distinguish between the gifted underachiever and the student of genuinely more modest ability. Certainly when I was at school, streaming was based on classroom outcomes (i.e. the results of prior teaching and set placement) rather than raw aptitude and personal potential. This by itself seems a recipe for underachievement because the gifted student who is already bored and frustrated risks losing heart with school altogether. The inappropriately setted student receives even less chance of being challenged on the necessary level, and a vicious circle of decline takes hold. (Unfortunately I speak from experience.)

Finally, there is the question of what to do with all those "lost souls" who have been underserved by the education system and then thrown out into the workforce. As a long time participant in various gifted blogs and forums, I see a steady stream of gifted adults showing up who have discovered their extraordinary nature for the first time in their thirties, forties and even

senior years, and had a revelation moment. At last – the explanation! How can such a person build an ability-appropriate career when they only find out, decades later, that they have been grossly educationally disserved and could have achieved so much more with the right kind of support? Perhaps Mensa should campaign for the DfE to provide special assistance to those mature members who were not equipped by their schools to make it to university when young. In addition to helping bright schoolchildren, bright mature folk need practical ways of escaping a run-of-the-mill job and getting back on track – and ones that don't cost several years and several thousand pounds before they can even get an entry-level position in their new career.

Gwyneth Rolph

WRITE ON!

To comment on Feedback letters or any other articles in Mensa Magazine use the new Write On forum in the members-only section of the Mensa website at www.mensa.org.uk
If you don't have a user name or password e-mail membership@mensa.org.uk



Political battle

It was certainly appropriate that the first edition of the magazine in the new format addressed the issue of the failure of many schools to get the best out of their intellectually-gifted pupils. However, I wonder whether one of the causes of that failure is that those bodies which press for a

better system are not winning the argument against those with other agendas. The social engineers, the foremost of which is Mr Clegg, are constantly spouting the superficially attractive position that everyone should have an equal chance and that all efforts should be concentrated on getting justice for children from disadvantaged backgrounds. They are pushing this harder than we are pushing our message and using the charge of elitism to dilute our modest efforts. Perhaps we should try a different argument.

As a student I worked in a number of manual jobs; as an employee on the railways, I worked with people doing many different types of job; as a householder, I have benefitted from the many skills of the craftsmen and artisans that have turned my houses into homes. I have yet to find someone in work that hasn't got talent! The benefits for finding everyone's niche and helping them work in their area of talent are huge. I would therefore suggest that the position we take in future in the education debate is that everyone has a talent and that it is up to the system to identify that talent, nurture it and bring it to the highest level that can be achieved while also helping to provide other skills to enable that talent to flourish (e.g. plumbers and electricians must also be able to handle finances and the paperwork necessary for the associated safety regimes). If every school operated on this basis, we wouldn't need the social engineering espoused by Mr Clegg and his friends.

Paul Seward

NEXT MONTH IN A FEEDBACK

Your views on whether we can use logic to prove there is such a thing as a soul...

Appendix 14 – Key findings of the 2009 Ofsted Study (4 pages)

Gifted and talented pupils in schools

Ofsted surveyed a small sample of 26 schools to evaluate their capacity to respond effectively to changes in policy in terms of making provision for gifted and talented pupils, and to identify good and less effective practice.

Age group: 5–18

Published: December 2009

Reference no: 090132

Executive summary

During July 2009, Ofsted visited 17 secondary schools and nine primary schools to evaluate their capacity to provide for gifted and talented pupils, to identify good and less effective practice and to determine how best schools might be supported. The 26 schools were selected because their previous inspection had identified an improvement point in relation to their provision for this group of pupils.¹

The Department for Children, Schools and Families (DCSF) has recently reviewed its national programme for gifted and talented pupils and concluded that it was not having sufficient impact on schools. As a result, provision is being scaled back to align it more closely with wider developments in personalising learning. Schools will be expected to do more themselves for these pupils.

Eight of the schools surveyed were well placed to respond to the proposed changes in policy. Their focus on improving provision for gifted and talented pupils had a positive impact on outcomes for all pupils. They had embraced key aspects of national programmes, not only Assessment for Learning and Assessing Pupils' Progress, but also the Institutional and Classroom Quality Standards.² The teachers had focused appropriately on matching their materials and activities in lessons to the needs of all pupils to make sure they were challenged.

The 14 schools where their capacity to improve was judged to be adequate had started to tackle the improvement points from their previous inspection, and all could show some improvement in outcomes for pupils. However, many of the developments in these schools were fragile and the changes had had limited success in helping gifted and talented pupils to make appropriate and sustained progress. Although most of these schools recognised that improving provision for gifted and talented pupils was important, it was not a priority. They had only just started to consider using the Institutional and Classroom Quality Standards for audit and evaluation. To build their capacity to improve provision, they would benefit from better guidance, support and resources from outside agencies and organisations.

In the four schools where the capacity to sustain improvements for these pupils was poorly developed, lead teachers and coordinators did not have sufficient status to influence strategic planning, and teachers had not been trained to meet the needs of their gifted and talented pupils effectively. Although they complied with basic expectations and requirements, for example, to identify such pupils and keep a register, developing provision was not a priority. These schools did not sufficiently

¹ The Annex A provides definitions.

² Gifted and Talented Institutional Quality Standards (IQS); for further information, see <http://ygt.dcsf.gov.uk/Community/Content.aspx?contentId=347&contentType=3>

recognise their own responsibilities to meet the needs of their gifted and talented pupils.

Engagement with parents was inconsistent. Many teachers were not convinced about the importance of making differentiated provision for these pupils, either because they thought it would be at the expense of other pupils or because they felt there was insufficient support to help them do this properly. All the headteachers felt that their task of improving provision for gifted and talented pupils would be easier if there was a clearer and stronger message from the DCSF that this focus should be a high priority for all schools. Very few schools had accessed, or encouraged their pupils to access, the Learner Academy.³ Gifted and talented pupils felt challenged in only some of their lessons because day-to-day lesson planning did not always reflect their needs. For many of the pupils, being identified as gifted and talented meant additional work and extra activities rather than an appropriate level of challenge within lessons, and their views were not adequately sought and listened to by their school.

Key findings

- In the best schools surveyed, the needs of gifted and talented pupils were being met alongside those of all pupils. The schools which focused on progress for all pupils were more likely to plan lessons that challenged their gifted and talented pupils.
- All the schools visited had a policy for gifted and talented provision, but many of these policies were generic versions from other schools or the local authority, and were therefore not sufficiently effective in improving the performance of all pupils, and especially the gifted and talented.
- In 20 of the 26 schools visited, pupils said their views were either not sought or not taken sufficiently into account in planning tasks and curriculum provision to meet their interests. The pupils indicated that the level of challenge was inconsistent across their lessons, and some had requested more challenging work.
- All the schools indicated that they had not fully engaged with the parents of gifted and talented pupils to help them understand their children's needs or how to provide effective support.
- The eight schools that were well placed to respond to additional requirements were led by senior leaders who had involved everyone in developing a vision of what could be provided for gifted and talented pupils. The status of lead teachers and coordinators was sufficient to enable them to influence and implement policy.

³ The Young Gifted and Talented (YG&T) Learner Academy is to be discontinued on 31 March 2010. It succeeded the National Academy for Gifted and Talented Youth (NAGTY), which was run by the University of Warwick under contract to the DCSF from 2002 to 2007.

- A common feature of the 14 schools where the capacity to improve was just adequate was that, although the senior staff shared their thinking with other teachers, they gave subject leaders too much flexibility to interpret school policy. The result was often inconsistency and a lack of coherence when subjects and curriculum areas were at different stages of readiness for establishing further provision.
- The four least responsive schools, faced with other competing priorities, lacked sufficient drive or commitment from senior leaders to develop or sustain provision for their gifted and talented pupils.
- Most of the schools said they needed further support to identify the most appropriate regional and national resources and training to meet their particular needs better. All those visited welcomed the DCSF's plan to produce a more accessible list or catalogue of opportunities available locally, regionally and nationally which staff, pupils and parents could use.
- Lead teachers and coordinators in all the schools felt the best way to improve challenge in lessons was for practical, subject-specific training for teachers to support them in refining planning and teaching for individuals and groups.
- All the schools visited felt they needed more support and guidance about how to judge what gifted and talented pupils at different ages should be achieving and how well they were making progress towards attaining their challenging targets across key stages.
- Most of the headteachers said their provision for gifted and talented pupils received little direct scrutiny from their School Improvement Partners.
- Some specialist secondary schools had established good partnerships with others to ensure that the needs of gifted and talented pupils were well met within their specialist areas, particularly in sport, where a national network has been established for several years.
- Just over half the schools visited said that, with support from coordinators for gifted and talented pupils in their local authority, they had established good links and collaborations with other local schools for enhancing provision. In the four primary schools and four secondary schools where such collaborations were weak, they cited the lack of such support as one of the main factors.
- All the schools visited had developed out-of-hours provision and programmes. However, the link between these and school-based provision was not always clear. The schools were not consistently evaluating their impact, although the specialist schools did so for their specialist subjects.
- There was little analysis of whether different groups of pupils on the gifted and talented register were progressing as well as they could.

Appendix 15 – Summary of Ofsted report of June 2013: The most able students (5 pages)

Report summary

The most able students

Are they doing as well as they should in our non-selective secondary schools?

National data show that just over a quarter of the pupils who achieved Level 5 in English and mathematics at the end of Year 6 did not make the progress expected of them in their non-selective secondary schools. As a result, they failed to attain at least a B grade in these subjects at GCSE. In 2012, 20% of the 1,649 non-selective schools with sixth forms teaching A levels failed to produce a single student with an A-level grade profile of at least two A grades and one B grade in at least two of the facilitating subjects required by many of the most prestigious universities.¹

This survey investigated why so many of our brightest students in non-selective state secondary schools, including academies, fail to achieve their potential compared with students who attend selective and independent schools. The vast majority of young people attending secondary schools are educated in non-selective state schools, so it is vital that we assess the current position, and suggest what might be done to improve outcomes in the future. We also examined why relatively few students from non-selective state schools apply to, or gain places at, the most prestigious universities. The survey focused on two key questions.

- Are the most able students in non-selective state secondary schools achieving as well as they should?²
- Why is there such disparity in admissions to the most prestigious universities between a small number of independent and selective schools and the great majority of state-maintained non-selective schools and academies?

We reviewed evidence from a variety of sources, including a survey of parents and 2,327 lesson observation evidence forms completed by Ofsted inspectors during

¹ The term 'most prestigious' is used to describe the Russell Group of 24 leading United Kingdom universities.

² For the purpose of this survey, 'most able' is defined as the brightest students starting secondary school in Year 7 attaining Level 5 or above, or having the potential to attain Level 5 and above, in English (reading and writing) and/or mathematics at the end of Key Stage 2. Some pupils who are new to the country and are learning English as an additional language, for example, might not have attained Level 5 or beyond at the end of Key Stage 2 but have the potential to achieve it.

recent inspections of 109 non-selective secondary schools. We visited 41 non-selective secondary schools across England in March 2013 to help us to understand the reasons why the most able students do not routinely achieve the highest grades.³ Schools were selected from all eight of Ofsted's regions and were a mixture of size and type. Nearly all of the schools visited had a broadly average intake in terms of their students' prior attainment at the end of Key Stage 2, although this varied from year group to year group. We gathered evidence about:

- the leadership of the school
- the achievement of the most able students throughout the school
- the transfer and transition of these students from their primary schools and their induction into secondary school
- the quality of teaching, learning and assessment of the most able students
- the curriculum and extension activities offered to the most able students
- the support and guidance provided for the most able students, particularly when they were choosing subjects and preparing for university.

The survey findings present a discouraging picture of what it means to be one of the most able students in non-selective secondary schools in England. The 2,327 lesson observation evidence forms scrutinised separately as part of this report showed that the most able students in only a fifth of these lessons were supported well or better in such schools. Moreover, in around 40% of the schools visited in the survey, the most able students were not making the progress of which they were capable. In a few of the schools visited, teachers did not even know who the most able students were.

Poor provision in the weaker schools visited resulted in:

- fragile transfer arrangements between primary and secondary schools
- students being placed in groups where the teaching did not challenge them
- irregular checks on progress
- a focus on students near the GCSE C/D grade borderline at the expense of more able students
- a failure to prepare them well for A-level examinations.

The visits also identified common characteristics in the schools that were doing well for their most able students:

- leadership that was determined to improve standards for all students

³ Inspectors also visited three selective schools for comparative purposes but their data and the evidence gathered are not included in the body of this report.

- high expectations among the most able students, their families and teachers
- effective transition arrangements that supported the students' move from primary to secondary school, ensuring that the most able sustained the progress they had made and maintained the pace of their learning
- early identification of the most able students so that teaching was adapted, and the curriculum tailored, to meet their needs
- flexibility in the curriculum, allowing the most able students to be challenged and extended
- groupings that allowed the students to be stretched from the very start of secondary school
- expert teaching, supported by effective formative assessment and purposeful homework, that stimulated students' enjoyment of the subject
- effective training and cooperative practice, ensuring that teachers learnt from one another
- tight checks on the progress of the most able students so that any slippage was identified early and acted on
- an effective programme that encouraged and supported the most able students to apply to our most prestigious universities.

Key findings

- **The most able students in non-selective secondary schools are not achieving as well as they should.** In many schools, expectations of what the most able students should achieve are too low.
- **65% of pupils who achieved a Level 5 or above in both English and mathematics at the end of Year 6 failed to attain A* or A grades in both these subjects at GCSE in 2012 in non-selective schools.** These top GCSE grades are a key predictor of success at A level and progression to university.
- **Leaders in our secondary schools have not done enough to create a culture of scholastic excellence, where the highest achievement in academic work is recognised as vitally important.** Schools do not routinely give the same attention to the most able as they do to low-attaining students or those who struggle at school.
- **Transition arrangements from primary to secondary school are not effective enough to ensure that students maintain their academic momentum into Year 7.** Information is not used carefully so that teachers can plan to meet the most able students' needs in all lessons from the beginning of their secondary school career.
- **Teaching is insufficiently focused on the most able at Key Stage 3.** In over two fifths of the schools visited for the survey, students did not make the progress that they should, or that they were capable of, between the ages of 11

and 14. Students said that too much work was repetitive and undemanding in Key Stage 3. As a result, their progress faltered and their interest in school waned.

- **Many students become used to performing at a lower level than they are capable of. Parents or carers and teachers accepted this too readily.** Students did not do the hard work and develop the resilience needed to perform at a higher level because more challenging tasks were not regularly demanded of them. The work was pitched at the middle and did not extend the most able. School leaders did not evaluate how well mixed-ability group teaching was challenging the most able students.
- **The curriculum and the quality of homework required improvement.** The curriculum in Key Stage 3 and early entry to GCSE examinations are among the key weaknesses found by inspectors. Homework and the programme of extension activities for the most able students, where they existed, were not checked routinely for their impact or quality. Students said that too much homework was insufficiently challenging; it failed to interest them, extend their thinking or develop their skills.
- **Inequalities between different groups of the most able students are not being tackled satisfactorily.** The attainment of the most able students who are eligible for free school meals, especially the most able boys, lags behind that of other groups. Few of the schools visited used the Pupil Premium funding to support the most able students from the poorest backgrounds.
- **Assessment, tracking and targeting are not used sufficiently well in many schools.** Some of the schools visited paid scant attention to the progress of their most able students.
- **Too few of the schools worked with families to support them in overcoming the cultural and financial obstacles that stood in the way of the most able students attending university,** particularly universities away from the immediate local area. Schools did not provide much information about the various benefits of attending different universities or help the most able students to understand more about the financial support available.
- **Most of the 11 to 16 age-range schools visited were insufficiently focused on university entrance.** These schools did not provide students with sufficiently detailed advice and guidance on all the post-16 options available.
- **Schools' expertise in and knowledge about how to apply to the most prestigious universities were not always current and relevant.** Insufficient support and guidance were provided to those most able students whose family members had not attended university.

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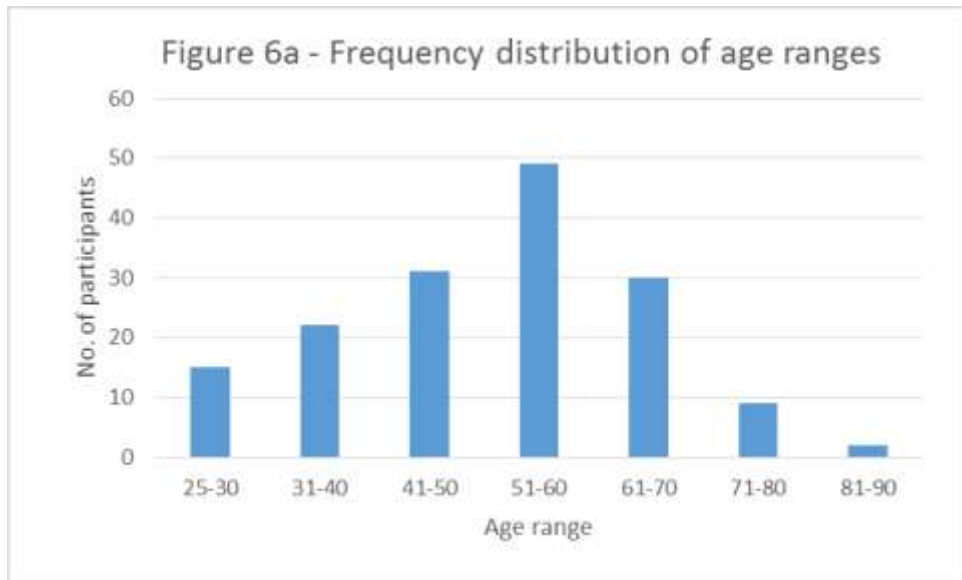
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Appendix 16 – Frequency distribution of ages of participants in first questionnaire

(see pie chart on page 139 – figure 6)



Age range	No of participants
25-30	15
31-40	22
41-50	31
51-60	49
61-70	30
71-80	9
81-90	2

Appendix 17 – Coded analysis of Question 1, questionnaire 1

	A	B	C	D	E	F	G	H
1								
2			Answers to Question 1: In what ways do you feel you have underachieved academically?					
3								
4	Left school with	Left school with	Good GCSES/O Levels	Good A levels	Good UG degree	(answer not related		Extra
5	nothing	a few GSCSE	but poor thereafter	but poor thereafter	but poor or	to academic		Comments
6				or dropped out	failed PG degree	underachievement)		
7								
8		X						
9		X						
10				X				
11				X				
12						X		
13	X							
14					X			2.1 + unfinished PhD
15	X							
16						X		
17		X						
18				X				
19	X							
20				X				
21								City and Guilds Electrical
22				X				
23			X					PGDip Marketing
24			X					
25	X							BA Laws at 40
26				X				
27						X		
28		X						
29		X						BCS Hons + PGCE (at 29 and 30)

	A	B	C	D	E	F	G	H
30			X					
31		X						
32	X							
33					X			
34						X		
35				X				
36					X			
37				X				
38			X					
39		X						
40	X							
41				X				
42								BSC in Land Management (28)
43		X						BA (28)
44				X				
45						X		
46				X				
47								
48		X						
49		X						
50						X		
51			X					
52			X					
53	X							
54				X				
55		X						
56			X					
57					X			Gap between potential and achievement
58				X				
59		X						
60						X		
61						X		
62					X			
63				X				
64		X						

	A	B	C	D	E	F	G	H
65	X							
66			X					
67				X				
68		X						
69				X				
70			X	X				
71				X				
72						X		
73						X		
74	X							
75		X						
76			X					
77			X					
78				X				
79				X				
80			X					
81				X				
82				X				
83				X				Dropped out and tried again
84			X					
85						X		
86					X			Too 'lazy' to go beyond this
87				X				Did not 'get' it until he was 29
88				X				
89				X				
90		X						
91		X						
92				X				
93			X					
94		X						
95		X						
96			X					Advised to do a secretarial course
97				X				

	A	B	C	D	E	F	G	H
98		X						
99		X						
100		X						
101			X					
102			X					Family not encouraging education
103				X				Got job, earned a lot , not worth going to uni
104			X					PhD age 52
105				X				
106						X		
107			X					
108		X						
109				X				Failed to get in to Cambridge as predicted
110		X						
111								Having achieved top marks in mocks year before. Got very bored
112			X					Had been entered for 5 with high expectations. Only barely passed 2
113				X				
114								Failed 1st degree, passed 2nd one with a 1st and at PhD at 48
115			X					
116		X						
117				X				Never fulfilled real ambitions-women no encouraged then
118		X						
119		X						
120		X						
121				X				Poor results academically from start to finish
122		X						
123								Went on to get two first class degrees in his 50s

	A	B	C	D	E	F	G	H
124								
125						X		
126	X							
127			X	X				E at A level Maths despite coming top in Independent Schools National Maths Contest
128		X						Has since got a 2.2 age 31
129				X				Dropped out of several ug and pg courses then passed later
130		X						
131			X					Alevel Maths grade E. Barred from University. Later in life (36) MSC Mathematics with distinction
132		X						Failed A level Maths. Went on to get disinction for BSC Mathsd with OU (age 46)
133								
134			X					
135				X				Poor A levels - passed in later life with 98% and 96% average and little effort
136			X					Sailed through with no work - did not learn to study
137				X				3rd at Cambridge + dropped out of MA in 40's
138				X				
139			X					Interested in too many things, unabeleto focus
140	X							
141			X					Top of class in primary school, failure secondary school, 1st class degree age 30

	A	B	C	D	E	F	G	H
142		X						
143		X		X				
144			X					
145				X				
146				X				
147	X							Asperger's + many learning disabilities
148	X							Currently studying for a PhD
149			X					
150		X						Went on to do a degree in her twenties
151			X					Foundered at A Level
152		X						Top of the class until age 13/14, unable to 'hack it' for higher quals
153				X				
154	X							
155				X				Found uni course boring and pointless
156				X	X			Unfinished PhD and Bsc but Msc
157		X						Top of the class and 'exceptional' until age 13- then lost interest out of sheer boredom
158				X				Degree in wrong subject, bored but it pays the bills, Very bright son dropped out of uni
159			X					Top of the class and 'exceptional' until age 11- then lost interest Has done very well professionally in advertising
160		X						
161				X				Did very well until GCSEs without work, less well at A Levels, 3rd class at Uni- never learnt to study

	A	B	C	D	E	F	G	H
162			X					Top of the class without trying up to age 12 then totally lacking in motivation
163			X					
164	X							Top of the class at primary school. Lost interest in boring curriculum
165			X					
166			X					
167		X						
168		X			X*			*Good UG and PG qualifications but still feels totally unfulfilled
169		X						
170		X						
171								
172	Left school with	Left school with	Good GCSES/O Levels	Good/OK A levels	Good/OK UG degree	(answer not related	TOTAL	
173	nothing	a few GSCSE	but poor thereafter	but poor thereafter	but poor or	to academic		
174				or dropped out	failed PG degree	underachievement)		
175	15	40	35	48	8	13	158	
176								
177	9,4%	25,7%	22%	30.30%	4.40%	8.20%	100.00%	
178								
179	A + B = 55 respondents		C= 35 respondents	D= 48 respondents	E = 8 respondents	E= 12 respondents	G = 158 respondents	
180	i.e.35% of 158		i.e. 22.2% of 158	i.e. 30.3% of 158	i.e.4.30%	i.e. 8.2%	i.e. 100%	

Appendix 18 – Example of coded analysis of Interview transcript

Appendix 18: Overview of interview themes.

(Figures in brackets show how many of the 10 interviewees manifested each theme)

A. Differences between interviewees

A.1. Socio-economic background

Working class (3); Lower middle class(3); Middle class (1); Professional/middle class (3)

A.2. Childhood family context

Caring and supportive of education (4); Caring but not particularly supportive of education (3); Unstable (2); Toxic (1)

A.3. Type of primary school attended

Good (5); Nothing special (2) ; poor (2); Succession of schools due to father's job (1)

A. 4. Type of secondary school attended

Good private school (1); good local grammar school (6); poor large comprehensive school (3);

A.5. Levels of academic underachievement

Left school at 16 with a handful of 'o' Levels' or 'CSEs' (7); Poor 'A' levels (2); Good O' and 'A' levels but left University during the first year (1)

B. Similarities between interviewees

B.1 Very high IQ score between 143 and 156 on the Weschler scale.

143 (1); 145 (2); 148 (2); 150 (2); 155 (2); 156 (1)

Much higher than the cut off point (132) for admission to Mensa.

B2.Starting school with advanced reading and speaking skills, wealth of factual knowledge and breadth of interests

Able to read before starting school (8), reading avidly as a child (7), interested in many different things (7), asking a lot of questions/wanted to 'understand things' all the time (5).

B.3 Falling behind by the age of 10-11 (2) and by 14-16 (8),

Attributed to dislike of school caused by lack of intellectual stimulation (8), leading to boredom (7), disengagement (7), 'not having learnt to learn' (6) and 'unfair' treatment by teachers (5).

B.4 Poor self concept: confusion about who they were/are. Some aware of being different but not knowing why and not liking it

Conscious of something 'amiss', being different, (6)not aware of being highly intelligent as a child due to poor school results (8). As an adult , realisation that they had been forced to be someone else for many years (6). Feeling they have to hide their high IQ because it is not always perceived positively by others (7).

B.5 Not fitting in, leading to low self-esteem, self doubt and isolation

Not fitting in in school and later in the work place had led them to feeling isolated (6), to doubt their abilities and qualities (8) , even doubting IQ score when passing the Mensa test (7); years of feeling a 'failure' leading to low self-esteem (8). Difficulty in finding people they can really relate to (6).

A.6 Reversal of academic underachievement (highest qualification obtained)

One HND (1); one B.A. (3); Two B.A.s (3); One M.A. (1) Two M.As (1) ; One PhD (1)

A.7 Age at which high IQ was discovered

18 (1); 23 (1); 26(1); 35 (1); 36 (1); 40 (1); 41 (1); 43 (1); 46 (1); 49 (1)

B.6 A very active mind

High levels of cognitive functioning (7), vivid imagination(6), need to be mentally active all the time (7) - if not, getting bored (8), often difficult to share train of thoughts with others who 'don't get it' (6).

B.7 Occupations aiming at helping others

Youth Justice Practitioner (1); FE lecturer teaching young offenders and students with learning disabilities (2); Writers/public speakers/ personal coach - interested in facilitating self-improvement in people and also doing volunteer work with disadvantaged people (2) Hypnotherapist (1) Lecturer in Psychology (1) Systems Analysts 'looking into the minds' of computer programmers in order to understand where they went wrong (2).

B.8 Values and beliefs: Cannot cope with injustice, cruelty, and unethical practices. Like to defend the case of the 'underdog'.

Hypocrisy (6), iniquity (6), falsehood (5), political correctness (5), social injustice (7), unethical behaviour (5) , cruelty (8): words and concepts used when asked what they did not like; own experiences of unfairness had led them to always wanting to support 'the underdog' (5).

B.9 Life Choices

7 out of 10 participants had no children by choice (fear of repeating their own childhood). The other 3 opted for private education for their children so that they would not have the same negative experiences as them.

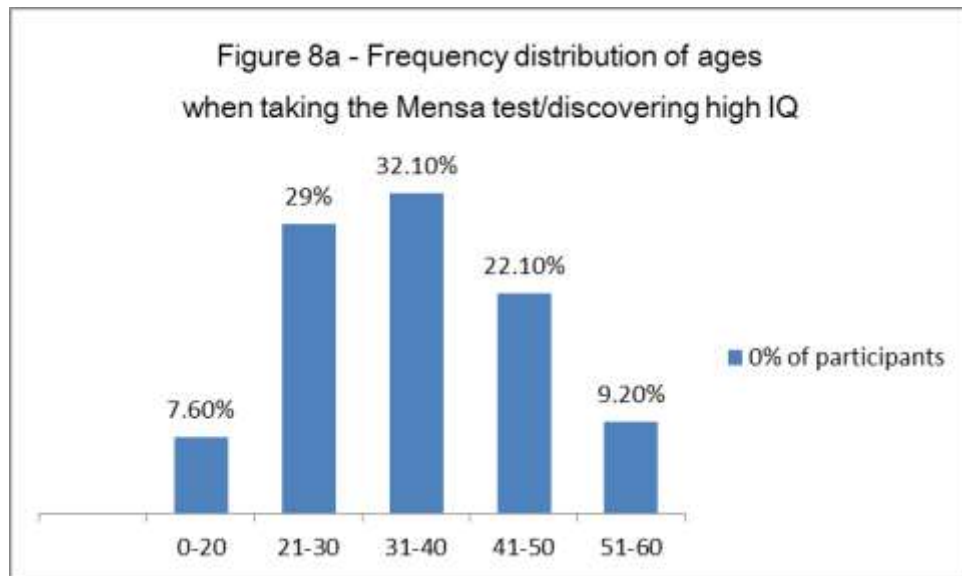
B.10 Mental well-being issues

Connection between unacknowledged high IQ, academic underachievement and (poor) mental well-being at some point in their life (8), leading to seeking medical treatment, short term counselling or long term therapy (7). Mental health affected by low-self esteem, poor self-concept and isolation.

Appendix 19

Frequency distribution of participants when taking the Mensa test/discovering their high IQ

(See pie chart on page 140 – Figure 8)



Age at which participants took the Mensa test	No of participants	0% of participants
0-20	12	7.60%
21-30	46	29%
31-40	51	32.10%
41-50	35	22.10%
51-60	14	9.20%