Exploring the Learning Experiences of Year 10 Students in Maltese State Schools Attending Top-set Classes and Comparing them to Average Ability Classes

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

The University of Sheffield

Faculty of Social Sciences

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March 2023

Declaration

I, Josanne Ghirxi, confirm that this work is authentic and that I am the author of this thesis: *Exploring the Learning Experiences of Year 10 Students in Maltese State Schools attending Top-set Classes and Comparing them to Average Ability Classes*.

I am aware of the University's Guidance on the Use of Unfair Means (www.sheffield.ac.uk/ssid/unfair-means). This work has not previously been presented for an award at this, or any other, university.

March 2023

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Abstract

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This thesis aims to investigate and document how students, teachers and parents experience learning and schooling within top-set and average ability classes in the Maltese track system. A narrative literature review was carried out to inform the compilation of the semi-structured interview questions for the main study. This study also analysed the students' experiences from the perspectives of their teachers and parents/guardians.

The inductive analysis of the interview data led to the identification of four themes and three sub-themes. Overall, the school experiences of the gifted and average participants were positive and together with their parents, they felt that tracks supported their academic, social, and emotional needs. They had similar learning experiences and preferences, and they felt their learning needs were being met by their teachers. Both gifted and average participants had no difficulties in social relations and were not affected by the track system. Gifted student participants differed from average learners in that they did not feel pressured by their parents. Their families' expectations were in line with their own, whereas average participants felt their parents' pressure to achieve good grades and that their families' expectations were not in line with their own. Whilst gifted participants learned faster than their peers, both gifted and average participants had their preferred strategies for learning. Teachers also remarked on the gifted students' fast way of learning and the challenges they found to implement learning strategies for gifted students.

This thesis is a contribution to the understanding of learning experiences of gifted and average students in the Maltese track system. In so doing, it signifies the critical role of educators to create nurturing and inclusive schools with suitable pedagogies. It also makes several recommendations to policy makers, educators, and researchers, on potential ways to address the needs of gifted students attending Maltese schools.

Dedication

This work is dedicated to my husband Kevin and son Gary, who have always been there to encourage and support me during this long journey, to complete this research.

Acknowledgements

I begin by expressing my deep gratitude to my supervisors, Dr Anna Weighall and Dr Lauren Powell, whose constant support, encouragement, and guidance were instrumental throughout my research. I am tremendously grateful for their dedication, commitment and words of advice that were crucial to remain on track and complete this study.

I would like to thank my superiors for being a source of inspiration and who contributed to my professional growth and in some way shared my experiences.

I would also like to express my thanks to the school leadership team of the identified State school who helped me in the identification of the participants. My sincere appreciation to the students, parents and teachers who took part in the research and were ready to share their experiences with interest and enthusiasm. Without them, this research would not have been possible.

I am grateful to the Ministry for Education, Sport, Youth, Research, and Innovation in Malta for funding my EdD programme and research through the Tertiary Education Scholarship Scheme (TESS).

Finally, I would like to thank wholeheartedly my husband Kevin and my son Gary whose incessant support and encouragement helped me throughout the period of my research. Their understanding and unconditional love gave me the strength and perseverance to help me complete this thesis. Special thanks to Gary for being my unfailing computer guide and mentor during this time, even if busy with his own M.Arch studies.

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List of Abbreviations and Acronyms

BVDS	Bully Victimisation Distress Scale
BVS	Bully Victimisation Scales
CAQDAS	Computer Assisted Qualitative Data Analysis Software
CCP	Core curriculum programme
G&T	Gifted and talented
HA	High ability
IQ	Intelligence quotient
IT	Information technology
LSE	Learning support educator
MATSEC	Matriculation and Secondary Education Certificate
MCAST	Malta College of Arts, Science and Technology
MeSH	Medical Subject Headings
MEYR	Ministry for Education, Sports, Youth, Research, and Innovation
MIVC	Ministry for Inclusion, Voluntary Organisations and Consumer Rights
NMC	National Minimum Curriculum
NSTF	National student travel foundation
PICOS	Participants, Interventions, Comparisons, Outcomes and Study design
PRISMA	Preferred Reporting Items for Systematic reviews and Meta-Analyses guidelines
RITHA	Radboud CSW International Training on High Ability
SDQ II-S	Self-description Questionnaire II
SDT	Self-Determination Theory
SEC	Secondary Education Certificate
SSC&P	Secondary School Certificate and Profile
SUP	Stop using plastic
UK	United Kingdom
USA	United States of America
YRE	Young Reporters for the Environment
ZPD	Zone of proximal development

Chapter 1 - Introduction

1.1 Introduction

This research was concerned with explaining the learning experiences of Maltese Year 10 gifted students assigned to top-set classes, as compared to their average ability peers. The study also analysed students' experiences from the perspectives of their teachers and parents / guardians.

In accordance with Principle 8 of the Maltese Education Policy, a track system has been implemented in national middle and secondary schools (Ministry for Education and Employment, 2002). The track system remains an acknowledgement of the diverse needs of the student cohort and clarifies that this diversity is not only due to disability, but "also giftedness" (Ministry for Education and Employment, 2002, p. 2). Even more, the track system implements different curricula, with the most challenging curriculum for the top-set classes, to the less challenging curriculum in the lower set classes (Bugeja, 2016). Top-set classes are only reserved to students who attain the highest Year 8 annual exam grades in the core subjects (Maltese, Mathematics and English). This means that in accordance with Principle 8 of the Policy, the top-set classes (which provide access to the most challenging curriculum) are intended for the gifted students only.

1.2 The different definitions of giftedness

The concept of giftedness has been long debated (Ambrose et al., 2010; Balchin et al., 2009; Moon & Roselli, 2000; Pfeiffer, 2002) and reaching an agreement on a common definition remains an unresolved challenge. The extent of the complexity of the subject matter was brought to light by Carman (2013), who analysed 104 empirical articles in 38 journals for her investigation of methods used to distinguish between gifted and non gifted students. She acknowledged observing no consensus on the definitions. The lack of consensus on a definition led researchers to apply a variety of methods to select gifted students for research with resulting difficulties to interpret, compare or generalise results.

The plethora of definitions available include definitions which reflect intelligence rather than giftedness (Carman, 2013). Some definitions introduced the concept of intellectual genius,

which is genetically inherited (Galton, 1869). Terman (1916) recognised a single *g* (general intelligence) factor, whereas other definitions considered three aspects of giftedness (practical, creative and analytical) (Sternberg, 1991). Later, Sternberg (1999) further developed this to include the broader theory of successful intelligence, and which included the cultural context in the development of giftedness.

More recent definitions encompass the multidimensional aspect of giftedness to include an array of traits, skills and abilities (Reis & Renzulli, 2010). Renzulli (1977) proposed the multifaceted conception of giftedness, where giftedness was considered as an interaction of three basic elements of human traits (above average ability, motivation and creativity). Gardner's (1993) introduction of multiple intelligences had a great impact on the gifted field and introduced the belief that individuals possess a range of intelligence (rather than fixed).

Frasier & Passow (1994) collated traits, aptitudes, and behaviours common to gifted students, explaining that whilst not all may be displayed by the student, they may manifest themselves in different ways. These traits, attitudes and behaviours had been identified by researchers and appear comparable across cultures, including motivation, enhanced memory, creativity, problem solving capability and humour. Gagné (1985) believed that the environment and other factors can help develop the potential and aptitude within an individual into either well developed abilities or high performance. Similarly, Subotnik (2003) believed that definitions of giftedness should change since students develop and should include actual accomplishments. For her, this was highly significant; her research suggested that many deemed giftedness and high IQ as similar and neither considered eventual accomplishment, nor the lack of it which are manifested as students grow older. Explaining further, she stated that "…giftedness in children is probably best described as potential" and this potential would need to be developed into "outstanding potential" in order to maintain the gifted label in adulthood (Subotnik et al., 2011, p. 22).

Borland (2005) argued that giftedness is a social construct and that an overarching label cannot encompass this diverse group. He explained that it was essential to attend to their needs rather than labelling them. This was also debated by Smedsrud (2020, p. 94), concluding that there were different definitions of giftedness "because the concept is inherently vague."

Several Maltese policies (Ministry for Education and Employment, 2002, 2014b, 2019b; Ministry of Education Youth and Employment, 2004) refer to "gifted students", however there is no national definition of gifted students. This poses several issues because opens the possibility to different interpretations by schools, teachers, and parents. To this effect, a definition suiting this research was selected by the researcher. The definition will be explained in detail in the next section.

1.3 The definition of giftedness adopted for the purpose of this research

The variety of definitions referred to in the previous section reflected a disputed subject in research, where discords have been attributed to cultural values, social politics (Trail, 2011) and geographical location (Corbett & Corbett, 2018). The implications are that a 'gift' in one place may not be deemed as such elsewhere. Smedsrud (2020) furthered a study by Carman, to assert that the co-existence of the several definitions serving different objectives was attributable to the fundamental vagueness of the concept of giftedness. He further submitted that different definitions reflected "that giftedness is a social construct with multiple meaning" (Smedsrud, 2020, p. 94). This reaffirmed Freeman's earlier assertions that giftedness is a social construct and that identified gifted students demonstrate "recognisable giftedness acceptable within a society at that time" (Freeman, 2006b, p. 385).

For the purpose of this study, the researcher adopted Porter's (2005, p. 37) definition of gifted students, *i.e.*,"…those who have the capacity to learn at a pace and level of complexity that is significantly in advance of their age peers in any domain or domains that are valued in and promoted by their sociocultural group." This was deemed to suit this research because the Maltese education system caters for different ability levels through the track system and students in top-set classes have a more complex and challenging curriculum than their peers in the lower ability tracks, but which must be covered within the same time frame.

1.4 Background to the study

Although the implication in the Maltese Education Policy document is that students in top-set students are gifted, it lacks a definition of gifted students.

From a practical perspective, the concept of inclusive education is a central focus of educational policies in Malta. Locally inclusive education is still associated strongly with disabilities; a Ministry for Inclusion, Voluntary Organisations and Consumer Rights (MIVC) was set up and whose portfolio mostly encompassed the disability sector. 67% of the publications on the Ministry's site were related to disability (Ministry for Inclusion Voluntary Organisations and Consumer Rights, 2021). The remaining publications addressed areas of the Ministry's portfolio, which were related to consumer rights. The Policy on Inclusive Education in Schools: route to quality education (Ministry for Education and Employment, 2019b) adopted the definition for inclusive education from the conclusions of the Council of the European Union (2017). This holistic definition was selected to support the aim of the Inclusion Policy to bring about the required shift from a 'one size fits all' educational model to one which was more socially just and responded to all the diverse needs of learners. This was explained in the Diversity wheel (Ministry for Education and Employment, 2019b, p. 16), which explicitly mentioned learners who were either gifted, talented or manifested high ability, under the category of Cognitive & Learning Diversity.

1.5 Research setting - The Maltese secondary educational

This section sets out to give some background information about the Maltese education system and the relevant policies that set out the pedagogy and practice in schools particularly the secondary setting which is the backdrop of this study.

According to the Maltese Education Act ("Education Act: an Act to reform the law relating to education in Malta," 2019), compulsory schooling is between the ages of five and 16 years. This covers six years of primary education, two years of middle schooling and three years of secondary education. State schools are free, but parents can opt for church or independent schools, whilst benefitting from tax rebates. All state schools are co-educational, but some non-state schools are single-sex schools. It is obligatory for all schools in Malta to abide by the Education Act and the National Curriculum Framework (Ministry for Education and

Employment, 2012). On completion of secondary schooling, Maltese students can further their studies and training in post-secondary and tertiary educational institutions.

Before the abolishment of the 11+ examinations in Malta, students either attended the Junior Lyceum or, if they did not pass the examinations, attended Area Secondary Schools. With the introduction of college systems in Maltese schools, state schools were re-organised in a college system according to the demography of the island. At the time of research, there were nine colleges in Malta and one in the island of Gozo. This means in all colleges bar two, several primary schools from predetermined geographical locations feed one middle school, which in turn feeds one or more secondary school/s. In two colleges (one of which was selected for the study), their respective middle school was incorporated within the secondary school. Students attend the primary, middle and secondary school pertaining to the College, depending on their geographical location. Due to Malta's small size, the education system is highly centralised, however with the setting up of colleges, there has been decentralisation of certain functions, such as participation in school projects, teacher training and procurement of resources (Ministry for Education Youth and Employment, 2005). For the core subjects (Maltese, English, Mathematics, Science in middle schools and Physics in secondary schools, students are grouped into tracks according to their academic ability.

There are four tracks. Track three is the highest track and has a spectrum of students' abilities ranging from students who achieve top grades to average ability students. Track two has students below average ability, whilst Track one and the Core Curriculum Programme (CCP) are designed for students with lower ability. Each track is streamed, such that there is a class with students who have achieved highest grades to the lowest grades. Students may be in different tracks for different subjects, all depending on their ability in the subject.

At the end of middle school, students choose two elective subjects (academic, vocational or a mix of both) to continue studying in secondary school. At the end of secondary school, students sit for the Secondary Education Certificate (SEC) examination, which is very similar to the UK's GCSE system. SEC examinations are set up by the Matriculation and Secondary Education Certificate (MATSEC) Board of the University of Malta. A recent reform now ensures that SEC examinations are available in levels one, two and three to cater for the diverse ability levels of students. Furthermore, some SEC examinations are no longer

summative at the end of compulsory schooling, but comprise of coursework, which would have been carried during the secondary school years.

1.5.1 Gifted and talented students in the Maltese educational system

The new concept of equity and entitlement in compulsory education was introduced by the National Minimum Curriculum (NMC) (Ministry for Education and Employment, 1999), which supported a holistic learner-centred learning experience. The aim was for curricula to be designed to meet the learners' needs, by being broad, balanced and engaging. Educators were motivated to use diverse teaching strategies, appropriate for the learners' interests, age, and abilities, linked to modern technology and reflective of the learners' daily experiences. Following Malta's accession to the European Union, more changes had to be implemented, especially on the selective compulsory education system and the curriculum had to be more democratic. The aims of the NMC were maintained by the National Curriculum Framework in 2009, which was translated into law in 2012 (Ministry for Education and Employment, 2012). This framework was intended to move from a prescriptive curriculum to a learner-centred approach through flexible and diverse routes to learning, with the aim of empowering learners to reach their full potential and become lifelong learners. The proposed changes were intended to introduce equity and decentralisation and release schools from a centralised knowledge-based syllabus to more curricular autonomy to educators and formative approaches to assessments.

In 2014, the Framework for the Education Strategy for Malta 2014 – 2024 (Ministry for Education and Employment, 2014a) was launched with the aim of lowering the gaps between boys and girls and those attending different schools, raise the bar for literacy, numeracy, science and technology, support the education of children at-risk, reduce the incidence of early school leavers, increase participation of lifelong learning and increase the attainment in vocational and tertiary education. This framework committed the necessary values, skills, and attitudes for present and future generations to become active citizens and employable.

Where do Maltese gifted students stand in all this? There is no national definition for gifted students even though "gifted students" are mentioned in the policies. Creating Inclusive Schools: Guidelines on the implementation of the National Minimum Curriculum on Inclusive Education (Ministry for Education and Employment, 2002) included an important disclaimer

that giftedness should also be acknowledged as student diversity and not just disabilities. There were three other instances where “gifted child” or giftedness” were referred to in this policy document to be considered for their individual educational needs. The Inclusive and Special Education Review (Ministry of Education Youth and Employment, 2004) highlighted that inclusive education should include gifted students, also carrying a section of the report (6.19) on gifted children. The document recommended that a policy on inclusive education should include gifted children, however it also highlighted that there was a lack of systematic screening and identification of these students. The document estimated that there were approximately 70 gifted students attending state and non-state schools during that time and that appropriate identification and differentiated teaching was necessary.

Strategic Action 3.3 of the document - A Strategic Plan for the Prevention of Early School Leaving in Malta (Ministry for Education and Employment, 2014b) was dedicated to meeting the needs of high achievers. This strategic plan recommended that schools could cater for the needs of gifted students by investing in teacher and parent training, tailoring learning tools and resources, especially virtual learning environments, to challenge these students further, and utilise the larger community to design challenging programmes to enhance student engagement. A Policy on Inclusive Education in Schools: a route to quality inclusion (Ministry for Education and Employment, 2019b) adopted the definition for inclusive education from the Council of the European Union (2017) and specifically included learners who were gifted, talented or manifested high ability under cognitive and learning diversity.

1.6 Identified research gap

The researcher did not come across any exploratory or theoretical studies comparing Maltese gifted students and their average peers in different ability groups. Therefore, to the best of the researchers’ knowledge, there is no scientific literature on the learning experiences of these two groups of students and what their needs are. This research aims to influence school practices and academic research, for the benefit of Maltese gifted and average ability students. This phenomenon was better understood by involving the students’ teachers and their parents / guardians. The research of the main study was informed by the narrative review (Chapter 2), which provided an evidence-based research approach and guided the interview questions carried out for this research.

Of practical relevance, this research aspires to contribute to the implementation of the Inclusion Policy *vis-à-vis* gifted and average students so that informed decisions may be taken and guarantee the rights to a quality education. This will help bridge the gap between policy and school practices.

From an academic perspective, this research aims to address the theory - practice gap in the Maltese setting. By involving the students, their teachers and parents / guardians, the study may also contribute to knowledge by providing a thorough understanding of the three different perspectives.

Finally, this study may contribute to long-term benefits to a society which may profit greatly from understanding, encouragement and providing quality education to students with different abilities, to further enhance their potential.

1.7 Aim and objectives of the research

The aim of this research was two-fold. A narrative literature review drawn from the wider literature review was carried out to determine whether different classroom interventions, affecting their learning experiences, were required for gifted students in mainstream schools, when compared to their non gifted peers.

The results of the review were utilised to set up the questionnaires of the main study with the aim of exploring the learning experiences of Maltese students attending Year 10 top-set and average ability classes. Interviews were carried out with these students together with their parent / guardian and identified teachers. In this way, this study also explored the students' experiences from the perspectives of their teachers and parents / guardians.

1.8 Research questions

The main study set out to answer the following research question:

> What are the learning experiences of Year 10 Students in Maltese State schools attending top-set in comparison with average ability classes?

The students' experiences were analysed together with the perspectives of their teachers and parents / guardians.

1.9 Thesis structure

Following this introduction, which includes the researcher's ontological and epistemological positionality, *Chapter 2* details the narrative literature review process which was used to synthesise the understanding of the learning experiences of gifted students. The purpose of the narrative literature review was to summarise and build upon previous research about the learning experiences of gifted students in mainstream schools and their perceptions of learning and teaching strategies that they find suitable to meet their learning needs. The methodology and methods of the narrative literature review are also explained. The results of the five identified topics and discussion with the wider literature follows, together with the strength and limitations of the narrative literature review, future research, recommendations, and contribution to knowledge are also presented.

Chapter 3 sets out the qualitative methodology adopted for this study and its rationale. This chapter also elaborates on the method applied and the process undertaken for the selection of participants, the development and use of the semi-structured questionnaire, the coding paradigm and the methods used for data management. Thematic analysis through NVivo is described as well and the chapter ends with a discussion on ethical considerations.

Chapter 4 gives an overview of the participants and presents the research findings under the four themes and three sub-themes that emerged from the data, with supporting quotations to give meaning to the interpretations.

Chapter 5 discusses the key findings of the semi-structured interviews under the four themes and three subthemes, taking into consideration the research question and the wider literature. The key findings are presented, critically analysed, evaluated, and compared with the identified topics and findings of the narrative literature review. The limitations of the study and future recommendations addressed to the identified stakeholders are also discussed.

Chapter 6 concludes the research with the researcher's contribution to knowledge and recommendations.

1.10 Overall methodology

1.10.1 The constructivist paradigm

Traditionally, the philosophical paradigm influencing research is either positivism or interpretivism. The selection of the philosophical paradigm will eventually determine how the study is articulated. Guba (1990, p. 17) defined paradigm as a "basic set of beliefs that guides action", encompassing the researcher's ethical, ontological, epistemological and methodological principles.

The researcher believes that the constructivist paradigm, which adopts a relativist ontology, subjectivist epistemology, and a naturalistic methodology (Lincoln et al., 2018), fits the purpose of this research study. In section 1.7.3, the researcher will elaborate in some more detail on her strong belief that reality is subjective, this being the rationale for grounding her research in the constructivist paradigm, which is rooted in the interpretivism philosophical paradigm.

Constructivism was first proposed by Piaget (1968) as an educational philosophy. In his analytical contributions to the theory of learning and teaching, Piaget discussed two ways for a student to gain knowledge – communicated by the educators to the learners, but also constructed in the learners' minds. The process of constructing meaning is critical to the constructivist paradigm because this is suggestive of the idea that knowledge has to be constructed and learning is a process, which is intrinsically active (McLeod, 2019). McLeod presented three further principles, which are interrelated to the first two *i.e.*, knowledge is socially constructed, it is personal, and exists in the mind.

The quest for absolute, true, and objective knowledge has challenged several researchers and philosophers alike. Dewey (1938) has adopted a naturalistic approach and builds on the understanding that knowledge is created through experience. In congruence with undertaking a narrative literature review, the research question, and the researcher's interest in the learning experiences of gifted students, the format suited a constructivist approach. This is founded on the philosophical belief that people create their understanding of reality based on their interactions with their environment (Guba & Lincoln, 1994). This is also echoed by Wisker (2008) who posits that through relationships with things, others, and events, people construct knowledge and give meaning through their experiences. Constructivism is

a model that formulates that students learn through interactions with their teachers, parents and peers (Powell & Kalina, 2009).

Constructivism is not only a learning theory but also inspires and links to qualitative research design, not least because of the qualitative researchers' quest to seek knowledge and construct meaning of the phenomenon being researched through the experiences of others and their own.

It is also important to highlight the sociocultural perspective given that, people can actively mould the actual forces that shaped them during the process of interacting with the environment and others (Daniels et al., 2010). The social and cultural perspectives are reflected in the student's abilities, schooling experiences, perceptions of learning and interpretations, during their interactions with others which are highly influenced by their community values and beliefs (O'Toole & De Abreu, 2005). The social and cultural capital of the students' families is particularly important and reflects on their learning experiences because "higher SES families produce more of the kind of skills that schools reward" (Davies & Guppy, 2006).

Vygotsky's zone of proximal development (ZPD) is an important concept of constructivism, that accentuates the teacher's role in a student's learning (Vygotsky, 1978). ZPD implies that students would be able to understand and master skills and knowledge with the help of a teacher, that they would not have been able to do so independently. Therefore, the teacher does not have a passive role but rather plays a crucial role in the student's attainment of knowledge and skills (Schreiber & Valle, 2013). Probing the teachers' perspective for the purpose of this research was therefore very important.

1.10.2 Ontological and epistemological perspectives

The ontological and epistemological beliefs of researchers are critical and interlinked; after all, ontology is the branch of philosophy which deals on what is out in the world, while epistemology is the study on the enquiry of knowledge.

The research paradigm inspires the choice of methodologies (Kivunja & Kuyini, 2017), (which is highly influenced by the researcher's ontological and epistemological values (Gill, 2014)). To this effect, the research questions, methodology and methods applied in any research

project are influenced by the ontological and epistemological beliefs of the researcher, impacting also on the generated knowledge. The main point lies on how researchers position themselves *vis-à-vis* their beliefs on reality, and whether the researcher (and what is being researched) overlay.

Braun & Clarke (2013, p. 51) discussed how views vary across a range – from the "mind-independent truth" of realism to relativism, where understanding reality depends on one's "interpretation and knowledge." Braun & Clarke argue that being on either side of the spectrum, the ontological assumptions of realism and relativism are different. Spearheaded by Emile Durkheim, the 19th century French sociologist, social realism assumes that truth is out there and can be (impartially) discovered with the application of good methods and techniques to collect empirical reality. With that ensured, it is just a matter of reaching out to it and collect it because the world is real, measurable, and objective. Durkheim had famously claimed that "society is a *sui generis* reality…" (Carls, n.d.).

The relativist ontological assumption submits that rather than objective, reality is subjective, depending on the given interpretation and the knowledge of the person. This contrasts with the realist perception on a point of principle. Whilst the realist perspective considers society a *sui generis*, the relativist approach considers the human as a *sui generis*. This therefore means that there are multiple realities, all constructed and relative to the uniqueness of every individual, unique member of society. It suggests a discrepancy between truth and reality.

Epistemological assumptions relate to the nature of knowledge. The epistemological perspectives of how knowledge is generated also vary between a realist and relativist. Lincoln et al. (2018, p. 220) made an interesting analysis of the "metaphysics of alternative inquiry paradigms." Whilst the realist assumption is that knowledge can be generated through the research process *per se*, the relativist epistemological position is that of a researcher who is part of what is being researched. To explain how people generate their own perception of reality, Braun & Clarke (2013) attributed the terms 'discover' and 'create' to the two epistemological positions and compared the realist researcher to an archaeologist who is digging and discovering reality, in contrast with the relativist researcher, who is compared to a sculptor crafting own reality as seen through his eyes.

The researcher does not intend to engage in a debate on whether an approach is superior or inferior to the other because it is beyond the scope of this research. Then, it is more of different approaches to generate knowledge rather than one approach being supreme over the other. Nonetheless, the researcher believes and aligns herself with the submission that absolute reality is unachievable.

Epistemological assumptions inspire how a researcher gains knowledge during research – it is about the theory of knowledge, identification of participants, the way data can be attained, analysed and communicated to others (Kivunja & Kuyini, 2017). These assumptions are influenced in several ways including political affiliations, religion, culture, gender, sexual orientation, socio-economic status, history and geographical locations (Sikes, 2004). Therefore, depending on the approaches taken by the researcher to address the 'what' and 'how' questions related to ontology and epistemology, these will determine what data is collected, how it is collected, the way it is analysed, and eventually presented to the reader. Dan Solomon & Eke (2018) insist on the importance of the researcher to explain the ontological underpinning of the study, not least because it will inform the epistemological approach adopted and, eventually, the methodology and methods, data collection and data analysis.

By adopting a social constructivist, ontological standpoint, the researcher acknowledged the multiple truths and the uncertainty which this brings on the real meaning of the phenomenon being recorded. The researcher also acknowledges that the approach adopted is influenced by the baggage she brings, and which has been elaborated in her positionality statement in sub section 1.7.1. If the construction of meaning to a phenomenon is based on perceptions, past experiences, beliefs, knowledge and biases of the individual constructing that meaning, then *per se*, this is already an indicator of "individual, constructed nature of reality" or, the "internal mediated reality" (Jonassen, 1991, pp. 7-8).

Therefore, the position which the researcher takes to study gifted students is not actually rooted in an objective setting – aligning herself with Jonassen (1991) and differing in meaning from the Durkheimian beliefs of treating social facts as realities (Durkheim, 1982). The research approach was designed on her perspective that impartial access to reality is not possible and as the observer, she cannot detach herself from what is being observed. The realist idea suggests that such an approach is due to epistemological weakness – after all,

giftedness is there, can be observed, analysed, and reported, independent of who the researcher is. The researcher believes that this is somehow shallow because her work was influenced by her own view of the world she is researching, hence, she cannot be separated from that same world she is observing, analysing, and reporting.

The researcher does not subscribe to absolute objectivity; believing that the world is very complex with numerous perspectives, none of which is more (or less) relevant than the others. In so believing, the researcher takes an ontological relativism approach in her attempt to give meaning to the learning experience of children.

The claim that impartial access to the world is not possible, is reflected in the methods which she has adopted in her thesis *i.e.*, by engaging not only the students, but also their parents and teachers. Although observations in class were not possible due to Covid-19 restrictions and outside school impossible to achieve, the use of semi-structured interviews as a data collection instrument indicated the researcher's attempt to provide the necessary flexibility and leeway to the research participants with the objective of eliciting as much information as possible and gain access to a perspective of reality, which was exclusive to that particular participant. The strategy of interviewing the parents and teachers, rather than limit herself to the students only, identified perspectives which would have at best remained hidden, or at worst, misrepresented. Accessing these perspectives (and even analysing them with the perspectives presented by the non gifted peers), enabled her to gain other meanings of gifted children experiences.

It is true to submit, however, that to access these perspectives, the researcher had to apply her own understanding, and by applying a relativist ontological position, she acknowledges that this would have influenced the interpretation of the data. Cognisant of this factor, the researcher's selection of the semi-structured interview approach enabled her to take advantage of the gained flexibility and discuss beyond the questions made to the participants.

Chapter 2 – Narrative Literature Review

2.1 Introduction

Debates have been ongoing on the notion of giftedness, proposed conceptual models and definitions in the domain of gifted education (Subotnik et al., 2011). This disagreement has been attributed to the diverse cultural values and social politics (Trail, 2011) and geographical location (Corbett & Corbett, 2018). It is claimed that most contemporary models of giftedness are developmental and contextual in nature and support the gradual development of an outstanding ability in a specific domain to an outstanding talent dependent on environmental and personal influences (Gagné, 2005; Subotnik et al., 2011). Heterogeneous definitions of giftedness have led researchers to use different ways of selecting gifted students for their research, thereby weakening the generalisations with other research studies (Carman, 2013). Although there are various domains of giftedness, also acknowledged by the contemporary models, it is intellectual giftedness which has been mostly studied (Jarosewich et al., 2002).

There has been a constant push for inclusive education (Salend, 2008), that is, to ensure that all children can fulfil their potential (Roach et al., 2002). It is important to study giftedness when viewed from the context of inclusive education. Inclusive practices in Malta are linked to disabilities and the related individual needs. Although the Policy on Inclusive Education in Schools: route to quality education (Ministry for Education and Employment, 2019b) refers to gifted students, there is a different understanding at political level. For instance, the Ministry for Inclusion, Voluntary Organisations and Consumer Rights (MIVC) is very much linked with disabilities, even though the vision and mission statements talk of a wide social sphere and a comprehensive society. There is no reference to gifted students, even though MIVC works in tandem with the Ministry for Education, Sport, Youth, Research and Innovation (MEYR) on students with disabilities. It is therefore clear that inclusion is being linked and attributed to disability. MEYR seems to have limited its work towards gifted students to competitions such as Mathematics Activities for Gifted and Talented Students and Malta Junior Science Olympiad without ever getting into a national discussion on how the needs of gifted children can be addressed, except for an 18-month programme that was organised for educators on a voluntary basis in 2018 in collaboration with Radboud CSW International Training on High

Ability (RITHA) programme. Therefore, it is important to create awareness on how inclusion goes beyond disability and should also include the individual needs of gifted students.

A unique set of characteristics attributed to gifted children is provided in literature, which does not homogeneously describe them. Frasier and Passow (1994) compiled the traits, aptitudes and behaviours that are regularly distinguished by researchers as common to gifted children across different cultures, although each one is not exhibited by every gifted student. These include motivation, advanced interests, communication skills, memory, insight, imagination, creativity, problem solving, inquisitiveness, reasoning, and sense of humour. Rotigel (2003) singled out a number of gifted students' characteristics, mainly advanced knowledge, downplaying of abilities, intimidating teachers, challenging behaviour if not engaged appropriately in class. He expressed concern on how these characteristics may affect their socio-emotional development. This is a controversial debate in literature. Peterson (2009) described gifted students as having adjustment difficulties making them socially vulnerable, whereas Berlin (2009) referred to a number of studies which submitted that gifted students were able to socially adjust. Other researchers claimed that gifted students have more enhanced social and emotional adaptations than their peers (Francis et al., 2016; Shechtman & Silektor, 2012).

The supportive role of teachers and parents / guardians and the positive effects it has on the learning experiences of gifted students is highlighted in research (Coleman et al., 2015; Golle et al., 2018; Oswald & Rabie, 2017; Rotigel, 2003; Siegle, 2015; Szymanski & Wrenn, 2019). Park & Oliver (2009) referred to two schools of thought for perceptions of teachers on gifted students and reported that several teachers claimed that gifted students can make it on their own without additional interventions such as, being given more challenging activities, whereas other teachers believed that they have to understand the gifted children and adapt pedagogy to meet the needs of these students. Parents support their gifted children in a variety of ways including a stimulating home environment, physical resources and financial commitments to enhance their children's development further (Vialle, 2017). Social class and gifted students were correlated in research (Jolly & Matthews, 2012) and there are opportunities which middle class parents / guardians can provide to their gifted children, including exposure to travel and other cultural events, availability to reading resources, and investment in academic lessons and tutoring (Corbett & Corbett, 2018).

Literature on the learning experiences of gifted students raises several questions. Do additional interventions help gifted students perform well or pedagogical procedures need to be adapted for them? What knowledge are teachers expected to have to effectively teach gifted students? What strategies are teachers employing to meet the needs of these students? Is the curriculum challenging enough? What challenges do gifted students face in the classroom? How can teachers support students to overcome these challenges? Do school and parental expectations affect their social, personal and educational experiences? Are gifted students appropriately supported at home and at school? What is their relationship with their peers? Do these students communicate their school experiences to their parents and if they do, how are they addressed? How do parents manage their children's study habits, leisure time and the levels of support they provide? Are parents/guardians seen as role models?

2.2 Literature review

The purpose for completing this narrative literature review was to determine and learn from what has already been researched about the learning experiences of gifted students in mainstream schools and their perceptions of learning, the pedagogies and practices they perceived to be beneficial to meet their diverse potential and abilities. Furthermore, the researcher's intention was to position her research in the wider field of research, establish connections with research, and identify any gaps that need to be addressed to contribute to the current theory and practice.

The literature review was divided into three main sections – *Myths held about gifted students*, *Learning preferences of gifted students* and *Relationships with peers*. These areas were selected because they provided the ideal backdrop for the scope of the researcher's main study which was carried out in Maltese schools. These three areas, although distinct, are intertwined and will enhance the researcher's knowledge in gifted education and obtain new insights on the learning experiences of gifted students.

2.2.1 Myths held about gifted students

There are several misconceptions on gifted students, such that some educators claim these students can make it on their own and educators should focus more on students who

encounter challenges to learn (Abu et al., 2017). Winner (1996) proposed nine myths that influenced beliefs on giftedness. These included gifted students who have a high intelligence quotient (IQ), are gifted in all subjects, work hard though giftedness is inborn, do not require enrichment and acceleration and have pushy parents that drive them to overachieve. An update of the list was published in Treffinger (2009) to include that the gifted cohort was comprised of between 3% and 5% of the population, who were a homogenous group, having differentiation in mainstream classes was equivalent to gifted programs and should be sufficient, gifted students did not face problems and challenges or socio-emotional needs and they could make it on their own.

There is overlap, contradictions and diversity in the myths associated with giftedness, however, many believe these to be correct. These myths may be difficult to rebut because they may be applicable to some gifted students, but one cannot assume that this is the same for all gifted students. These myths may contribute to misconceptions and even prejudices and even lead to misinformation and even malpractices with gifted students that can hinder their development and learning.

2.2.2 Learning preferences of gifted students

Johnson and Engelhard (1992, p. 385) defined learning preferences as "student choices of the type of classroom structure with which they prefer to work to accomplish academic goals – whether in cooperation with their peers, in competition with their peers, or having no involvement with their peers." Gifted students' learning preferences are complex, distinctive and domain-specific (Samardzija & Peterson, 2015). When compared to their non gifted peers, gifted students prefer learning complex, high-level knowledge with interconnections among concepts, extra-curricular activities and being active participants in their learning. They dislike requesting help and waiting for their peers to finish their work (Kanevsky, 2011). Gifted students were found to be more task-oriented at school when compared to their non gifted peers (Schapiro et al., 2009) and learned at a faster rate with less repetitions (O'Reilly, 2014). Gifted students also seem to be better problem solvers, utilising a wide-range of coping strategies than their peers (Morris, 2013).

Griggs and Dunn (1984) highlighted that when student learning preferences were accommodated through appropriate teaching styles, there was significant improvement in

their academic attainments, approach and behaviour. However, more recent research reported that traditional approaches were still the most common activities in mainstream classes such as rote learning and group projects which did not fulfil the preferences of gifted students. Their learning was fostered by flexibility, independence (Gómez-Arizaga et al., 2016) and novelty during learning (Gomez-Arizaga et al., 2020).

Fundamental to the learning experiences of gifted students was the teacher's disposition, approachability, aptitude in the subject and interest in the student (Samardzija & Peterson, 2015). Gomez-Arizaga et al (2020) elaborated further that appropriate differentiation is used to accommodate the gifted students needs and characteristics. There are several schools of thought on the preferences of gifted students of either working in a small group (Cera Guy et al., 2019) or on their own (Davis & Rimm, 2005) especially if the social and learning environments were perceived to be not supportive (French et al., 2011). For instance, Walker and Shore (2015, p. 94) highlighted that one reason for gifted students to prefer working with students of similar ability was "to avoid becoming the victim of the free-rider effect" because they are understood better by these peers, work and think at the same level and keep the same pace of work.

2.2.3 Relationship with peers

Relations with peers are important for students and affect their social development and academic accomplishment (Kaşkaloğlu, 2009). There are differing findings on the relationships of gifted students with their peers at school. Coleman, Micko. K. J., et al., (2015) discussed potential social stigma, stereotypical expectations and even social isolation associated with gifted students which may lead them to hide their abilities. This had been attributed to their characteristics of learning faster, are more engaged in learning (Cross & Coleman, 2005) and have particular interests which do not match those of their peers (Coleman et al., 2015). This was also highlighted by Kokot (2005) who pointed out that the consequences of this may lead to dejection, reservation and lack of confidence for gifted students, affecting relationships with peers negatively. Gifted students also tend to engage in critical and abstract thinking and have a predisposition to be judgemental which may also put off peers (Altman, 1983).

Other research findings such as those by Lee, Olszewski-Kubilius, and Thomson (2012) demonstrated that gifted students had positive relations with their non gifted peers with comparable interpersonal skills. They did not consider their abilities as negatively affecting relations with their peers. Other research findings showed that gifted students were popular and well accepted by their peers (S. Lee et al., 2012; Weyns, Colpin, et al., 2021). Conversely, other research studies argued that gifted students preferred peers of similar intellectual ability (Kao, 2011; Laninga-Wijnen et al., 2019). This can be explained by Byrne's (1971) similarity-attraction hypothesis, which proposed that people are attracted to one another when they perceive to have similarities in important traits. Therefore, a relationship can be steady and fulfilling when friendship selection occurs with peers of similar ability because of enhanced communication and reciprocated understanding especially during academic discussions or tasks.

Therefore, due to the plethora of literature and predictable gaps on the experiences of gifted students at school, a narrative literature review was applied. This was essential for many reasons, mainly due to the vast literature on gifted students regularly published. The aim of this review was to update the understanding of the learning experiences of gifted students and highlight gaps in the current evidence bases, to help inform and guide the researcher on the areas to focus upon, for the interview schedule with the students, parents and teachers for the main study of this research.

Although there is a significant body of research on gifted students in general, the researcher has not come across a narrative literature review specifically on their learning experiences. The aim of this narrative literature review was to synthesise the understanding of the learning experiences of gifted students.

Therefore, this review aimed to address the specific research question "For gifted students in mainstream schools, is there evidence to suggest that different classroom interventions are necessary when compared to their non gifted peers, affecting their learning experiences?"

2.3 Methodology

The researcher carried out a narrative literature review with a systematic search.

Narrative literature reviews "are comprehensive narrative synthesis of previously published information…" which "..pull many pieces of information together into a readable format (Green et al., 2006, p. 103). A narrative literature review helps to summarise and build up on previous research, identify gaps in research and prevent duplication (Grant & Booth, 2009), whilst giving a synopsis of the matter being discussed in a comprehensible format (Murphy, 2012).

Contrastingly, systematic reviews have definite, rigorous and a prescribed approach to review the wider literature on specific topics of a particular subject. The scope of such a rigorous approach is to "identify, critically evaluate and synthesize" published information on a topic (Cronin et al., 2008, p. 39) with a clearly formulated research question. Systematic reviews promote transparency and the possibility of replication (Collins & Fauser, 2005).

Considering the extent of the main study, this methodology was selected over systematic reviews. A systematic review was deemed inappropriate because the aim was not to assess effectiveness of the studies; rather, the researcher's aim was to synthesise existing literature. This is further elaborated in the following sections.

2.3.1 Approaching the narrative review

The broadness of learning experiences necessitates the application of a narrative literature review. However, narrative literature reviews do not necessarily describe the methods used for review or how decisions were made (Collins & Fauser, 2005), potentially leading to dubious methodological approach (Murlow, 1987); whilst a non-standardised methodology in narrative literature reviews may potentially expose the researcher to bias (Green et al., 2006; Schmidt & Gøtzsche, 2005). Other weaknesses associated with narrative literature reviews relate to a lack of analysis of the data collected and conclusions by the researcher which may not be questioned for validity, "lending undue credence to a preferred hypothesis" (Grant & Booth, 2009, p. 97), and a less comprehensive search strategy with no approved guidelines for narrative literature reviews (Ferrari, 2015).

Strengths associated with narrative literature reviews include the fact that they cover a variety of topics of a given subject, but the search for evidence is flexible. Typically, narrative literature reviews do not disclose how decisions on the relevance and validity of the included studies were carried out, however the search strategy and procedures must meet the researcher's criteria. The broad aspect of giftedness (including learning experiences, social relations and definitions) necessitates flexibility. A flexible methodology is provided by narrative literature review approach (Collins & Fauser, 2005). Other perceived strengths of narrative literature reviews include the identification of previous accomplishments, consolidation of previous research and identification of knowledge gaps (Grant & Booth, 2009).

Therefore, the scope of the narrative literature review in this study was limited to the identification of knowledge gaps and to assist the researcher during the early stages of the research (Cronin et al., 2008) rather than to analyse the collected data. The researcher has endeavoured to utilise best practice recommendations in this narrative literature review and 'borrowed' them from systematic review methodologies. This helped the utilisation of an effective bibliographic search strategy and reduce bias in the selection of articles for the narrative literature reviews, a strategy endorsed by several researchers (Collins & Fauser, 2005; Ferrari, 2015), emphasising that narrative literature reviews would profit from the thoroughness of systematic narrative reviews and setting up inclusion and exclusion criteria for the search strategy and relevance criteria for selection.

2.4 Methods

The aim of this narrative literature review was to synthesise the understanding of the learning experiences of gifted students.

The objectives were to identify the research question and the search terms by applying PICOS (**P**articipants, **I**nterventions, **C**omparisons, **O**utcomes and **S**tudy design) (O'Conner et al., 2011). Eligibility criteria were determined, and a literature search was then carried out. A synthesis of the identified papers was then compiled to highlight gaps in the current evidence bases to help inform and guide the researcher on the areas to focus for the interview schedule with the students, parents, and teachers.

The overall research question for the mapping stage, guided by PICOS is:

> For gifted students in mainstream schools, is there evidence to suggest that different classroom interventions are necessary when compared to their non gifted peers, affecting their learning experiences?

For the purpose of the mapping stage, the researcher adopted the definition of learning experiences by LaRocco and Fanelli (2021, p. 394) *i.e.*,

> "any experience, planned or unplanned, in any number of settings and contexts that transforms learner insights, supports emotional growth, and builds knowledge, skills, and dispositions."

Inspired by the work of Lock et al.(2004), classroom interventions, which are intended to help educators address gaps in a student's learning, were defined by the researcher as effectively planned activities which utilise various strategies to overcome barriers to learning and which can be achieved by teachers being reflective practitioners, flexible and receptive to students' interests and needs.

2.4.1 Literature search

Electronic databases were searched between January and February 2021. The databases searched were CINAHL via EBSCO, Scopus, PsycINFO, MEDLINE Ovid, Web of Science and included journals published between 2010 and 2021, such as - Gifted Child Quarterly, High Ability Studies, Journal for the Education of the Gifted, Journal of Advanced Academics (previously known as Journal of Secondary Gifted Education), Gifted Education International, Roeper review, High Ability Studies, and Gifted Child Today.

Table 1 summarises the search sources and resulting 'hits' according to the eligibility criteria.

Database	*Overall results*
EBSCO search	1986
Medline Ovid	218
Web of Science	75
PsycINFO	404
Scopus	2262
Total	4945

Table 1 – Search sources and resulting 'hits' according to eligibility criteria

Electronic citations were downloaded, added to the EndNote software and de-duplicated.

Keywords were compiled to be used for the search strategy, which were guided by PICOS (**Table 2**). Medical Subject Headings (MeSH) keywords used were intelligence, instruction motivation, self perception, career choice, self concept, self esteem, and achievement.

Text terms used were gifted, talented, high ability high-ability, able, high-aptitude, high achievers, exceptional, intellectual, clever, academically gifted, intellectually gifted, intervention, differentiation, learning preferences, differentiated curriculum, differentiated, acceleration, higher-order, pace, personalised, learning needs, class, classroom, schoolroom, learning style, enrichment, instructional strategies, non gifted, non gifted, nongifted, peer, learning experience, lived experience, ability grouping, social relations, future aspiration, choice of subjects, experience, stress, social emotional and socio-emotional.

Terms were combined using Boolean logic ("AND", "OR"). MeSH are official terms or phrases, used to identify journal articles in electronic databases. Text words and synonyms are exclusive words that the strategy looks for in the title and abstract. The databases' search strategies are included in **Appendix 1**.

PICOS	*Criteria*
Population	Gifted students in mainstream schools aged 5 – 16 years old.
Intervention	Exploring whether different classroom interventions are necessary for gifted students.
Comparator	Non gifted peers in class / other ability sets.
Outcomes	The effect on their learning experiences, including their preferred ways of learning, career and subject choices, future aspirations, motivation, social relationships, self esteem and self concept.
Study-design	Empirical, conceptual or philosophical. Study needs to be evidence-based.

Table 2 – PICOS – Pre-specified criteria for including and excluding studies in the review

The search strategies from electronic databases and those from additional sources were searched to identify studies that potentially meet the search eligibility criteria. Titles and / or abstracts were retrieved, together with the full text of potentially eligible studies so that they could be assessed for eligibility. Those cases which were unclear were discussed with the supervisors. The following inclusion and exclusion criteria were taken into consideration during the review of screened titles and abstracts (**Table 3**).

Inclusion criteria	*Exclusion criteria*
English language	Not written in English.
Published after 2010	Published before 2010.
	Single case studies.
Student aged between 5 – 16 years	Students not aged 5 – 16 years.
Reports on learning experiences of gifted students	Study does not report on learning experiences of gifted students.
Peer-reviewed journals	Not peer-reviewed.
	Focus on students with special or additional educational needs or twice exceptional.
	Focus on students who are coming from minority groups.
	Focuses on gifted students in elite or magnet schools or the study setting is confined to gifted programmes.

Table 3 – Inclusion and exclusion criteria

The inclusion criteria for the selected studies from 2010 were considered; until then giftedness was defined narrowly, often being linked to the top 2.5% of students who score the highest grades. However, definitions then took a broader view (Subotnik et al., 2011) and hence, studies from 2010 were considered. This ensured that only the most relevant and high-quality research published since 2010 was included in this research.

Full papers that were considered as potentially relevant, were downloaded and screened in the same way as has been previously described, based on the inclusion and exclusion criteria (**Table 3**). Several peer reviewed papers provided direct comparisons between gifted students and their non gifted peers, whilst others did not. However, all the papers provided data on gifted students and therefore, they were still included in the narrative literature review, to be part of the wider analysis on the comparisons drawn for this review.

2.4.2 Search results

2.4.2.1 Study selection

The electronic searches yielded 4,945 articles and an additional 31 articles that were identified from other sources and reference searches. After exporting the articles to EndNote, 374 duplicates were removed. 4,571 articles were screened for relevance and 4,480 were excluded since the title and abstract did not meet the inclusion criteria. 91 full-text articles were then downloaded and screened, of which, 77 were excluded at the full-text stage. Details of the excluded studies with the reason for exclusion are given in **Appendix 2**. 14 articles met the inclusion criteria for this narrative literature review. **Figure 1** summarises the studies included in this review in the Preferred Reporting Items for Systematic reviews and Meta-Analyses guidelines (PRISMA) diagram.

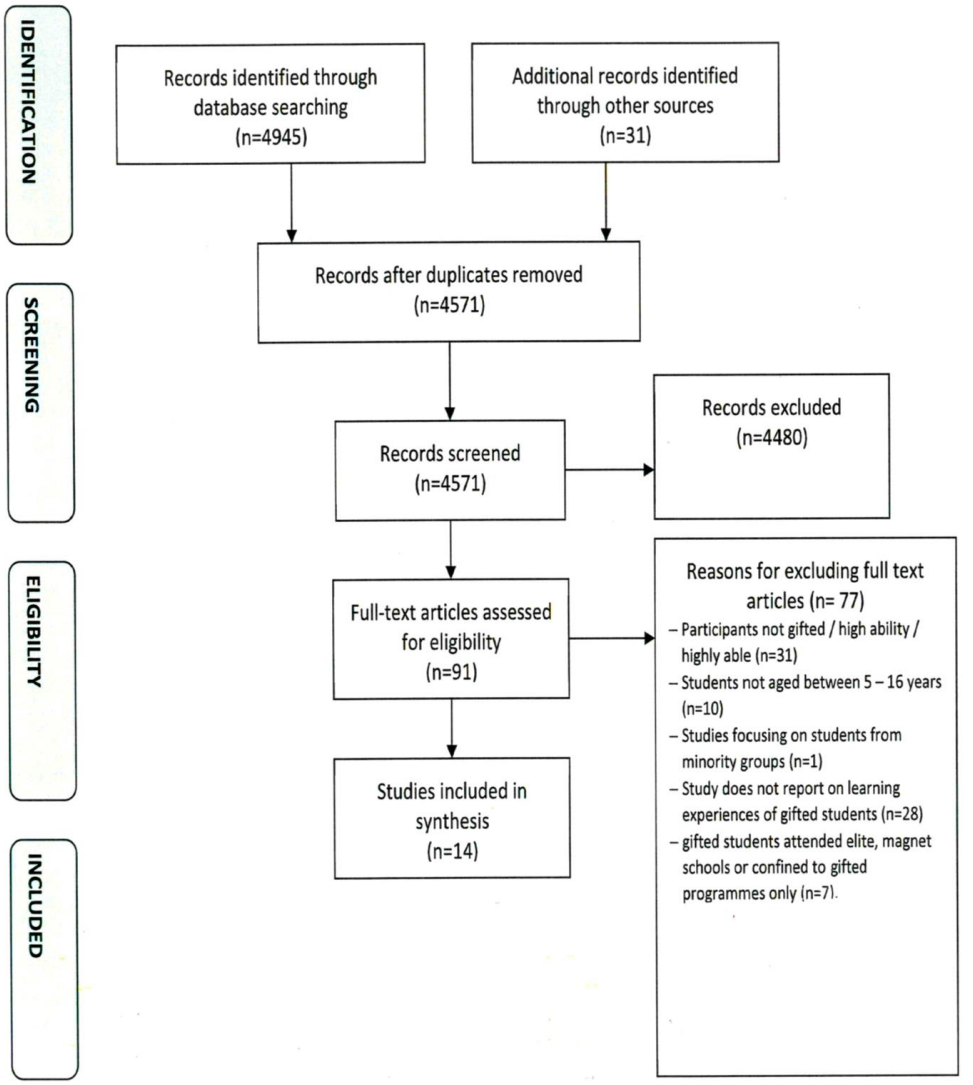

Figure 1 - PRISMA diagram

2.4.2.2 Data extraction

Data extraction was then tabulated to summarise the main characteristics of the 14 eligible studies included in this narrative literature review (*see* **Table 4** – Summary of the characteristics of studies included in this review). This table included all the information provided by each study design, the educational setting, details of the participants, outcome measures and results. After data extraction, the 14 selected papers were reviewed, summarised and results synthesised in relation to the research question.

Author, year country	*Study design*	*Educational setting of study*	*Who is / are the sample in the study / age / gender*	*Outcome measures*	*Result*
Skelton C., Francis B., Read B., 2010 United Kingdom (UK)	Qualitative interviews and ethnographic observations	Co-educational state secondary schools	N=71 high achieving pupils, 36 females, 35 males, 12 – 13 in Year 8	Exploring whether the perceptions of children seen as popular and high achievers corresponded with those not rated as popular by their peers.	The high achieving girls indicated that their experience at school remains a negotiation within the conventional scaffolds of femininity.
de Souza Fleith D., 2016 Brazil	Correlation and variance analysis	Public and private elementary schools	N=107, 58 males, 40 females, 8 – 13. 29/107 gifted and talented (G&T): 29 males, 12 females in Grade 4.	Comparison of the perceptions of class climate for creativity, family environment and motivation to learn between gifted and non gifted peers.	Differences observed between gifted and non gifted students on perception of school climate for creativity and motivation to learn, both valued the family environment positively.
Kanevsky L., 2015 Canada and United States of America (USA)	Quantitative study The *Possibilities for Learning* (PFL) (Kanevsky, 1996) survey was used to assess the students' preferences of specific aspects in their learning experience.	Elementary and Middle School	N=416 gifted students (171 in Canada, 245 in USA), 216 males, 200 females, 8 - 13 from Grades 3 – 8.	Investigating whether high ability students prefer to work with others and under what circumstances.	Majority of gifted students preferred to work alone but enjoyed group work in certain conditions.
Brigandi C.B., Weiner J.M., Siegle D., Gubbins E.J., Little C.A., 2018 USA	Qualitative case study, semi-structured interviews with individual students, parents and teachers.	One secondary school	N=10 gifted students, 4 males, 6 females, 13 – 14 in Year 9, their parents, teacher with more than 20 years' experience teaching G&T, holds masters' degree in gifted education.	Investigation of the environmental perceptions of gifted students to identify potential environmental factors that support their success.	Gifted students benefit from teachers trained in gifted education, homogenous grouping, involved parents and mentors to support their needs.

Tereshchenko A.,Francis B., Archer L., Hodgen J., Mazenod A., Taylor B., Perrper D., Travers M., 2019 UK	Qualitative analysis of the large-scale project 'Best Practice in Mixed Attainment'. Focus groups (40 – 60 minutes) and bespoke individual interviews (20 – 30 minutes).	Eight secondary schools practising mixed-attainment practice.	N=89 students, 31 males, 49 females, 11 – 12, including n=36 gifted students.	Analysis of attitudes of students in different attainment levels to mixed-attainment practice.	Half of the gifted students spoke positively of their mixed-attainment class experiences. The other half said lessons were not challenging enough.
Lam C. S., Yeung P.P.S., Yuen M 2018 Hong Kong	Qualitative analysis using semi-structured interviews (30 minutes).	Three primary and three secondary schools.	N=21 high ability students, 10 males, 11 females, 9-14.	Investigating how high ability students view their life at school and what factors contribute to their school satisfaction.	All students reported positive attitudes, overall satisfaction with school based on personal and environmental influences.
Stoeger H., Steinbach J., Obergriesser S., Matthes B., 2014 Germany	Qualitative analysis A cluster analysis that included intelligence, parent/teacher reported questionnaires on family and school environment.	Primary school	N=976 students, 479 male, 497 female, mean age 10.29. n=619 academically gifted in Grade 4. The parents of the 976 students and their teachers (47 classrooms) also participated through questionnaires.	Examined if environmental or individual moderators are more important in early stages of talent development.	Cluster analysis revealed three groups of students, two differed in motivation and learning behaviour. Questionnaires supported assumption that unfavourable individual moderators can be compensated by environmental moderators *e.g*. learning support by parents / teachers, family cultural capital and teachers' commitment.

Bicknell B., Riley T., 2013 New Zealand	Multiple-case studies using bespoke semi-structured interviews (pre and post transition) with the students, parents, teachers. Observations and documents (*e.g.*, policies, student reports, work samples) collected.	Primary, intermediate and secondary schools.	N=15 gifted students who transitioned from year 6 to 7: n=10; 8 males, 2 females, 10 - 11; n=5 students who transitioned from year 8 to 9, 3 males, 2 females, 12 – 13 and all parents/teachers.	Exploring school transitions for gifted students from multiple perspectives.	Students felt well prepared for transition however, not all students felt transition was smooth; support of peers with similar ability was integral.
Yuksel M., Arslan S., 2018 Turkey	Quantitative analysis A bespoke Personal Information Sheet to gather information about the student's gender, parents' education status and leisure activities.	Primary schools	N=368 gifted students, 157 males, 211 females in Grade 3 & 4.	Exploring relationship between self-perceptions and social behaviours of gifted primary children.	Self-perceptions of gifted children predicted social competence of antisocial behaviours; as self-perceptions increase, social competence increases, and antisocial behaviours decrease.
Pelchar T.K., Bain S. K., 2014 USA	Quantitative analysis Bullying and victimisation behaviour rates were measured by the *Reynolds Bully – Victimisation Scale* (BVS) (Reynolds, 2003). Psychological distress specifically related to victimisation was measured by the *Reynolds Bully – Victimisation Distress Scale* (BVDS) (Reynolds, 2003).	Elementary and middle school.	N=47 gifted students, 26 male, 21 female in Grades 4 & 5.	Investigation of bullying rates and victimisation among gifted children during transition from elementary to middle schools.	Gifted students experience higher prevalence of bullying before transitioning to middle school. Results found significant strong correlations between bullying and externalising distress (r=.49) and between victimisation and levels of internalising (r=.68) and total distress (r=.74).

Ogurlu U., Saicam H., 2018 Turkey	Quantitative analysis to assess forgiveness levels were used for data collection.	Middle school.	N=284 students: n=142 gifted, 78 males, 64 females; = 142 non gifted, 66 males, 76 females. Mean age: 13.28 from Year 6-8.	Comparing gender, bullying, victimisation, submissive behaviours and forgiveness between gifted and non gifted students.	Statistical difference between gifted and non gifted students' peer bullying, victimisation, submissive behaviour and forgiveness levels. More peer bullying experienced by gifted males. Gifted females experienced more peer victim levels than gifted boys.
Kosir K., Horvat M., Aram U., Jurinec N., 2016 Slovenia	Quantitative analysis of students' social, academic and general self-concept was assessed with the *Self-description Questionnaire II* (SDQ II-S) (Marsh, 1992). Sociometric positive and negative nominations and teacher assessment of social acceptance were also collected.	Elementary schools.	N=404 students, 191 male, 213 female N=85 gifted: 36 male and 49 female, ages 11 – 15 in Grade 6-9.	Investigating differences between gifted and non gifted students in terms of social acceptance and self-concept.	No significant differences in positive sociometric nominations and social preference were identified between gifted and non gifted students. Gifted students reported higher academic but not peer relations self-concept.
Verschueren K., Lavrijsen J., Weyns T., Ramos A., De Fraine B., 2019 The Netherlands	Quantitative analysis-questionnaires used with students, teachers & peers to assess peer acceptance using socio-metric nominations, social acceptance through a teacher-report scale and self-reported social acceptance and socio-metric nominations.	Elementary and secondary schools.	N=2736 students, 1368 male, 1368 female, mean age 11.8. n=1573 high ability: 787 males, 786 females in Year 6..	Investigation of differences, in peer acceptance between high ability and average ability students from the perspectives of their teachers, peers and students.	Teachers and peers reported high ability students better accepted than their average ability peers, however they did not show more positive self-perceptions of acceptance and nominated fewer peers as friends.

Watts J., 2019 USA	Qualitative analysis, Semi-structured interviews (20 minutes each) together with structured and unstructured observations (lasting from 20 – 60 minutes).	Elementary school.	N=10 gifted male students 8 – 11 from Grade 3-5.	Investigating gifted students' self -perceptions at school (in academic setting, social context of school and how they feel about school).	Gifted students want their teachers to know they still require academic support; they believe class behaviours are often misunderstood and wish to have their voice heard about curricular tasks.

Table 4 – Summary of the characteristics of studies included in this review

2.4.2.3 Data Synthesis

A narrative literature review was carried out because this constitutes the best instrument to synthesise the findings of the 14 selected studies. A preliminary synthesis was first compiled. The 14 selected papers were reviewed, identifying relevant aspects with the aim of collating into different identified topics. The data required for the narrative literature review was then extracted and inserted in a table. The identified topics were refined further to summarise the identified studies in a narrative synthesis within a framework, which consisted of - *Social relations with peers, Teacher – student relations, Teaching and learning experiences, Family relations* and *Leisure activities*.

2.4.3 Overview of selected papers for the narrative review

Three of the studies included in the systematic narrative review were conducted in Europe, two in the UK, three in USA, two in Turkey and one study conducted in USA and Canada, New Zealand, Brazil and Hong Kong. Seven of the studies had a qualitative study design and the other seven studies followed a quantitative study design. Three of the studies took place in secondary schools, five in primary schools, one in middle school and five undertaken in different settings (primary, middle school and secondary). The age range of the students varied slightly between the included studies (range between 8 years and 15 years). All the studies were on the learning experiences of gifted students in schools, however six of the studies had gifted and non gifted participants in the study.

The outcomes of the included studies ranged from perceptions of gifted students *vis-à-vis* class climate, motivation to learn, school transitions and environmental factors contributing to school satisfaction. They also related to preference of gifted students to work alone or with others, social acceptance, bullying and victimisation.

2.4.4 Findings of results

This review set out to answer the following research question:

For gifted students in mainstream schools, is there evidence to suggest that different classroom interventions are necessary when compared to their non gifted peers, affecting their learning experiences?

Based on the 14 eligible papers included in this review, the evidence contained therein suggested that appropriate classroom interventions were necessary for gifted students in mainstream classes. Through the literature review, the following five topics were identified: *Social relations with peers, Teacher – student relations, Teaching and learning experiences, Family relations* and *Leisure activities* which will be discussed in more detail in the pages to follow. **Appendix 3** provides a summary of the identified topics for each of the 14 eligible papers included in this narrative literature review.

2.4.4.1 Social relations with peers

Gifted students are perceived to have few social relations, are often bullied and called names such as 'nerd' and 'geek', and experience social and emotional problems due to their asynchronous development. Five of the studies which were included in the narrative literature review (Arslan & Yukay Yüksel, 2018; Košir et al., 2016; Tereshchenko et al., 2019; Verschueren et al., 2019; Watts, 2020) concluded that gifted students were well accepted by their peers and they were as socially adjusted as their non gifted peers, indicating that being gifted is actually not a risk to the socio-emotional development.

Košir et al. (2016) investigated the difference between identified gifted students and their non gifted peers in terms of social acceptance and self-concept. The findings indicated that there were no significant differences between gifted and non gifted students in peer relation self-concept and in most of the social acceptance measures. As a matter of fact, most gifted students were deemed either popular, or average in the sociometric groups. In terms of

positive nominations, there was no difference between gifted and non gifted peers, however gifted students received fewer negative nominations from their peers. This infers that they were less rejected than their non gifted peers. An interesting finding was the role of gender when it came to students' giftedness status, their social acceptance and self-concept. Although no interacting effects were reported for social acceptance measures, there were significant giftedness and gender differences for peer relations self-concept. Gifted boys reported a higher peer relations self-concept compared to their non gifted male peers, whereas gifted girls scored lower on peer relations self-concept compared to non gifted girls and lowest when compared to gifted boys and non gifted boys. In fact, gifted girls perceived their popularity, friendship, and the quality of interactions with same-sex peers as lower compared with non gifted girls. The research findings reported that the gifted girls had lower peer relations self-concept but were still accepted by their peers.

Arslan and Yukay Yüksel's (2018) research suggested that gender is a predictive factor of social skills and the social competence of girls is higher than that of boys, whereas the anti-social behaviour of boys was found to be higher than those of girls. Arslan and Yukay Yüksel found that the social competences of gifted students were significantly predicted by their self-perceptions *i.e*., as the social perception increased (which also influences their interpersonal skills) so did the social competence. Nonetheless, the self-perception of gifted students predicted their anti-social behaviours such that if the self-perception increased, the anti-social behaviours decreased. Another interesting finding of Yüksel and Arslan's research was that self-perceptions, social competences and anti-social behaviour of gifted students did not differ with reference to parents' education status.

Verschueren et al.(2019) used the "person-group similarity model" that hypotheses that gifted students tend to be more socially accepted in groups of high cognitive ability. The findings demonstrated that in classes with a higher means level of cognitive ability, gifted students felt they were more accepted by their peers. However, this acceptance by peers was self-reported by gifted students rather than claimed by their peers and teachers. This demonstrated that gifted students appeared to be more sensitive to the alignment of their attributes, with the norms within their peer group. The research findings also confirmed that gifted students were not only accepted by their non gifted peers but actually better accepted, even by their teachers, which contradicted stereotypical views that gifted students were

socially inept. This research also pointed out that gifted students nominated fewer peers as their friends, even if peers nominated them more as being their friends. Other interesting findings of this research were those echoed by Košir et al. (2016) that gifted students did not show lower feelings of social acceptance, when compared to their non gifted peers.

The above findings were replicated by Watts (2020) in her ethnographic study *i.e.*, gifted students did not feel that their non gifted peers considered them differently because they were gifted. They were aware that it was important to be included in a mainstream class but with access to a challenging and enriching curriculum. This was also pointed out by Tereshchenko et al. (2019) where a significant proportion of the gifted students participating in their research had positive experiences in mixed attainment classes and felt included. During the interviews, the gifted students drew on equity discourses and that these grouping systems supported fair and equal opportunities for all students. They could see how their non gifted peers were thinking and reasoning things out, and gifted students felt they had extra practice and revision that filled their knowledge gaps. The gifted students were keen to work with their peers of different abilities and even offer their support. Similarly, Bicknell and Riley (2013) explored the experiences of mathematically gifted students during school transitions, reporting that peers were a source of support, especially those with similar abilities and / or interests. As a matter of fact, gifted students who lost their friends reported that transitions were not smooth for them.

Lam, Yeung, and Yuen (2018) investigated the views of gifted students on their school life and the factors that contributed to satisfaction. The gifted students reported that they were not always in accordance with their peers, however they used social coping strategies to resolve these conflicts. They reported higher school satisfaction when they felt they had positive support from their peers. Gifted participants valued peers who were motivated to achieve, had common goals, and shared similar interests because they felt they could improve their skills / knowledge. This was confirmed in the research by Brigandi, Weiner, Siegle, Gubbins, Little (2018) where gifted students felt accepted and supported when working with peers of similar academic ability. In fact, some gifted students played down their ability to be accepted by their peers.

The research carried out by Skelton, Francis, and Read (2010) confirmed that there were gifted girls who were popular and could fit in the conventional gender interpretation *i.e.*, they

were interested in fashion, that they were good looking and found a balance between their academic work and peer social relations. In their discussion, the authors referred to the 2006 study by Renold and Allen to remark that not all gifted girls had the necessary capabilities and aptitudes to achieve this balance, which led them to adopt different approaches for coping between "doing girl" (playing down abilities to fit in with peers) and "doing success" (focusing on their success at the detriment of peer relations and conventional femininities (p. 189). This led to anxieties, separation and experienced rejection by some gifted girls who focused more on their achievement rather than peer relations.

Social relations for gifted students are not always positive. There are negative connotations with being gifted such as negative stereotypes, jealousy of their abilities by their peers, high expectations and social segregation. Ogurlu and Sarıçam (2018) compared gender, bullying, victimisation, submissive behaviour and forgiveness between gifted and non gifted students. Findings showed that bullying levels of gifted students were lower than those of non gifted students and peer victimization for gifted students was higher than their non gifted peers. Gifted boys had more peer bullying levels, while gifted females had more peer victim levels than gifted boys. Bullying was negatively correlated with victimisation, submissive behaviours and forgiveness, but submissive behaviours were positively related to victimisation and forgiveness.

Findings reported by Pelchar and Bain (2014) on rates of bullying and victimisation and associated distress among gifted students transitioning from elementary to middle school indicated that there was a significant, strong correlation between victimisation and levels of internalising distress, and between bullying and externalising distress. However, the findings could not support that gifted students are victimised more frequently when compared to their non gifted peers.

In summary, gifted students were well accepted by their peers and as socially adjusted as their non gifted peers. There were instances when gifted students were not in accordance with their peers, but they used their social coping strategies to resolve conflicts. At times, gifted students also played down their abilities to be accepted by their peers.

2.4.4.2 Teacher – student relation

Brigandi et al. (2018) investigated the environmental perceptions of gifted students attending an enrichment class when compared to their mainstream class. The participants commented positively on the enrichment of a teacher's supportive behaviour, who was trained in gifted education. Her support was described in three ways:

a) Affective development – created safe class spaces, fostered relations and supported intra and inter personal growth. The commitment and knowledge of the teacher was instrumental to find the student's strengths and interests and supported the creation of a safe class *e.g.*, participated in class activities with the students, shared humour and encouraged students to share ideas in class and accept ideas from others. The teacher fostered relations with students, mentors and parents;

b) Cognitive development – the teacher fostered challenging experiences through cross-curricular learning methodologies. This included creative and critical thinking, advanced research, communication skills and other skills used for research. Students found them challenging, however because they were appropriately supported by their teacher by scaffolding their learning to complete tasks; and

c) Self-regulation – the teacher fostered structured processes and helped students steer through these processes. Teacher used a weekly accomplishment plan (set of goals students had to accomplish) to help students keep on track and supported their completion of tasks.

This research suggested that challenging, encouraging and acknowledging gifted students for their efforts, in addition to establishing trusting relations with educators, would contribute to positive perceptions of the school experience.

Similarly Lam et al.'s (2018) research participants described good relations with their teachers and sought their support academically and emotionally. They highlighted positive teacher characteristics that the gifted students felt they were of support which included teachers' sensitivity to their individual needs, ability to listen and encourage them and the use of appropriate strategies of support to nurture their talents. Lam et al.'s research findings demonstrated that there were a range of factors that influenced school satisfaction in gifted

students, not only related to academic success, but also teacher support and building strong relations with teachers.

Conversely, two of the research studies (Skelton et al., 2010; Watts, 2020) reported that the perceptions of gifted students were not always positive with their teachers. Skelton et al (2010) highlighted that the Western world held stereotypical views that girls perform academically better than boys and they do better in examinations. This fostered an impression with teachers that girls are easier to teach than boys and they can academically achieve without any problems, which may create unnecessary pressures on girls. In fact, Skelton et al.'s research findings pointed out that high ability students either experienced lack of acknowledgement from their teachers for their efforts or their inputs were ignored, which led to frustrations. The notion that boys need more support from teachers led the latter to believe that gifted girls can make it on their own through the education system.

Similar findings by Watts (2020) through her observations and interviews with gifted boys also revealed that teachers expect gifted students to understand every subject easily, claiming further that this overgeneralisation led to shame and frustration for gifted students in subjects they were not confident in. The gifted students wanted guidance and support from their teachers for certain subjects, but they were very clear that this should be done discreetly for fear of losing their "gifted identities" (p. 50). The gifted students were keen on maintaining their academic status even if it meant not asking for help from their teacher. They were disheartened when teachers misunderstood their behaviours as disobedience and defiance. Watts gave several examples of such behaviours, which she witnessed during her observations, including getting out of their place to request help either from the teacher, or until their peers complete their work, talking to themselves or resting their heads on the desk during lessons they might not perceive as challenging. Gifted students felt that their teachers' behavioural expectations were as high as their academic expectations.

Research carried out by Stoeger, Steinbach, Obergriesser, and Matthes (2014) sets out to investigate whether environmental moderators contribute more than individual moderators in the early transformation of potential to achievement. Their findings demonstrated that teachers' attitudes and characteristics could support gifted students' achievements. Teachers' high level of commitment, setting of appropriate goals, appropriate learning strategies and monitoring of strategies were some characteristics that could potentially

compensate and contribute more than individual moderators for young, gifted students to transform potential into achievement. The importance of support from teachers was also highlighted in Bicknell and Riley's (2013) research which concluded that as students transition from primary to intermediate/ secondary school, teachers' guidance and support to develop necessary coping skills (such as self and time management, study skills and decision-making) could improve. Gifted students were also unaware of educational outcomes and even commented that they were not prepared for the little fish in a big pond effect.

These research studies showed that when teachers meet the cognitive and affective needs of gifted students and establish trusting relations with them, teachers contribute to the gifted students' positive perceptions and enhance their socioemotional growth.

2.4.4.3 Teaching and learning experiences

Watts's (2020) ethnographic study investigated the challenges, which gifted students encountered at school, and how they conceptualised their social aspects at school and their perceptions as students. Although the students pointed out there were subjects that they struggled in and required their teacher's support, they also highlighted the importance of having a challenging and engaging curriculum which facilitated their inclusion in a mixed ability class. They claimed that lack of challenging activities, working with peers that were not at similar academic levels, finishing their work quickly and having to find ways of occupying oneself, contributed to behaviours that were misinterpreted by their teachers. Traditional teaching methods such as worksheets, workbook assignments and tasks reinforcing rote memorisation, were not appealing and the participants spoke of their boredom during lessons and schools not being motivating and exciting places to learn. They preferred projects, inquiry-based learning tasks, being allowed to talk to peers whilst working, creating and building things. The gifted students also felt that their school experience lacks the possibility that they can give their opinion for selecting appropriate and engaging instructional methods that are relevant to their learning styles and academically challenging for them.

These findings had also been identified in Tereshchenko et al. (2019) where 23% of the gifted students expressed negative views on mixed-attainment classes and described the lessons as 'boring', 'dull'. 'slow', 'not challenging enough' since teaching approaches and content did not vary. They preferred individual learning at a fast pace. They also felt that mixed-attainment

classes limited their individual progress and claimed that negative behaviours from other students were distracting and affected their entitlement. They felt that these groupings suited low attainers, and they were not pushed to get either good grades or certificates, and differentiated teaching was not practised. Contrastingly, 41% of the average ability participants had positive views on mixed attainment grouping, which focused only on their own benefits. They felt that working with their peers enabled them to progress and they appreciated the fact that they had 'equal work' as their peers. 45% of the average ability participants expressed negative views due to their reduced academic and self-concept in mixed-attainment settings. They constantly compared themselves to gifted students to assess their ability that left them feeling frustrated, inferior, discouraged, embarrassed and struggling. Peer tutoring contributed greatly to this distress since they felt humiliated and decreased their self-confidence. This well-intentioned strategy, widely used by teachers, promoted labelling and resentment towards gifted students. These findings concurred with the findings of Košir et al. (2016) where it was reported that gifted students had a higher academic and general self-concept than their non gifted peers and gifted students perceived their academic abilities significantly higher than their non gifted peers.

Classroom climate influences the satisfaction at school of gifted students (Brigandi et al., 2018; de Souza Fleith, 2016; Lam et al., 2018). De Souza Fleith (2016) harped on the importance of preparing people from a very young age to solve problems creatively, especially gifted students, to develop their abilities and reach their full potential and be able to contribute creatively to society. The findings of her study demonstrated that gifted and non gifted students positively evaluated classroom climate for creativity. Both groups of students were interested in the quest for knowledge and were eager to carry out their school work. Student's autonomy obtained the lowest score, but gifted students presented a higher mean score on intrinsic motivation than on extrinsic motivation, whereas the non gifted students were more extrinsically motivated than gifted students and perceived themselves to be more creative. It was interesting to note that there was a positive correlation among all the factors of classroom climate for creativity to intrinsic motivation but none to extrinsic motivation for both groups of students.

Lam et al. (2018) research on school satisfaction demonstrated that there were a range of factors influencing school satisfaction, namely personal and environmental influences.

Following the analysis of the interviews carried out with gifted students, two relevant themes were identified under personal influences:

1. Goal-directed thoughts and motivation - gifted students worked hard to better themselves academically, socially and morally and they believed that school was the means to achieve their personal goals to their future economic success. All the participants were able to identify the purpose and value of what they wanted to accomplish, had the necessary motivation, aspirations and plans to set the goals they desired to achieve. They perceived school could provide the necessary support to meet these goals, which consequently kept them motivated and engaged. The goals they set were not only related to academic matters but also to other interests;
2. Self-discipline and self-regulation - the participants had the necessary self-discipline and positive attitudes when faced with challenges and demonstrated dedication to learning.

Lam et al. (2018) findings on environmental factors that influenced school satisfaction for gifted students, were also echoed by Brigandi et al. (2018) study (on environmental perceptions of gifted students of the enrichment class, when compared to a mixed attainment class) where teachers, peers, family and the curriculum all played an important role. In Brigandi et al. (2018), the role of mentors was also highlighted by the gifted students, who felt that mentors contributed positively by helping them with time management, provided academic and emotional support, and supported their development of appropriate skills, and locate resources. The gifted participants also discussed the positive challenging learning experience they encountered in the enrichment class when compared to the mixed attainment class, due to factors already highlighted above in Watts (2020) findings. These included an appropriately challenging curriculum focused on different learning styles, multiple intelligences, cross-curricular learning methodologies and conceptual blocks that supported the students' affective development and challenged them intellectually. A weekly accomplishment plan helped the gifted students keep on track, supporting their completion of tasks. Other activities included discussions and flexible grouping activities particularly with like-minded peers especially when it came to kinaesthetic learning and collaborative problem-solving. The gifted students did not perceive their peers in the mixed attainment class as being like-minded or working together in a group and did not find them supportive.

Kanevsky (2015) investigated whether gifted students of different ages preferred to work with peers. When working with others was neither possible nor attractive, it then transpired that most gifted students preferred to work alone. The most negative ratings obtained were working with peers who learn quicker than they do, being assigned a group by their teacher, and being taught by their peers. They preferred to choose their group, work with peers who learn at the same rate. The nature of the task at hand was also mentioned. There were no identified statistically significant gender differences when responses of boys and girls were compared. Younger and older gifted students differed on four ratings. There were statistically significant age differences found for seating arrangements and activities in group settings. Gifted and talented young students preferred to sit alone and peer tutor, however, as they grew older, they preferred to sit in clusters and contribute to group discussions.

Schools are expected to prepare students for transition from one school to another. Findings from Bicknell and Riley's (2013) study with gifted students, their parents and teachers, demonstrated that gifted students felt that orientation visits, school prospectus and information obtained from siblings and peers prepared them for the systematic/organisational changes. The gifted students felt academically prepared for the recipient school and were keen on being taught by specialist teachers, however they were concerned on subject continuity and preparedness for certain topics. Some of the students felt they were not prepared for the little fish in a big pond effect and found it hard to find themselves from the 'top' at the feeder school to the 'bottom' of the class in the new school. The level of preparedness and support from schools, peers and parents had the potential of affecting academic progress.

The above findings from the different research studies concurred that when gifted students are challenged, encouraged and acknowledged for their efforts and skills development, they will succeed.

2.4.4.4 Family relations

It is often postulated that gifted students experience high expectations from their parents. However, four of the five studies discussed the positive family environments and the supportive role of parents in the experiences of gifted students at school (Brigandi et al., 2018; de Souza Fleith, 2016; Lam et al., 2018; Stoeger, Steinbach, Obergreisser, et al., 2014). Lam et al. (2018) indicated that although gifted students experienced high expectations from their

parents, they described their parents as responsive to their needs and supported them academically and in non-academic situations (such as spending time with them, resources and emotional support). This helped the gifted students set achievable goals and succeed.

Similarly, Stoeger et al. (2014) also reported positive family environments for gifted students, which was evaluated through a questionnaire focusing on parental learning support, assistance with homework and aspects of cultural capital (parents reading motivation, number of books at home and parents education background). These findings were confirmed by the gifted students' parents, who reported that their children only necessitated high levels of autonomy-supportive instructions, low level of controlling instructions, and self-efficacy for assistance in homework. Brigandi et al. (2018) elaborated further on parental support and their findings indicated that parental support helped gifted students develop positive attitudes. All gifted students participating in the study indicated that parental support was directly linked with successful task completion, enhanced project quality, and their ability to self-regulate. They described their parents as supporting them academically such as in writing tasks, statistics, organisation of the tasks and giving artistic touches to assigned tasks, and non-academically by providing logistical support to complete projects. Gifted students also recognised that parents helped their self-regulation by supporting and encouraging them and utilising discipline which supported them to ensure work is done and pushed them to their limits.

De Souza Fleith (2016) introduced her study stressing on the importance of preparing children from a very young age to solve problems creatively, especially gifted students to develop their full potential and be able to contribute creatively to society. The role of motivation in the learning process was highlighted, while pointing out that other factors (such as school / class climate and family environment), promoted students' engagement, support, flexibility and autonomy, which in turn played an important role in learning. De Souza Fleith's study compared the perception of classroom climate for creativity, family environment and motivation to learn for gifted and non gifted students. For both gifted and non gifted students, the findings on the family environment were good quality family interactions. Based on the participants' replies, it transpired that family relations were harmonious, supportive, exhibited affection and with few divergences. However, there were statistically

significant differences in the use of physical punishment by parent/s of the non gifted students. Contrastingly, parents of gifted students were seldom rigid or authoritarian.

Bicknell and Riley (2013) research demonstrated the importance of schools to engage parents and students, especially pre and post transition. Their research on the experiences of gifted students during school transitions demonstrated that parents acknowledged that their children were well prepared by the feeder school and transitions were smooth. The parents acknowledged that the teachers' contributions from the feeder school helped the students develop skills to set goals, maintain coherent work standards and understand expectations for the seamless transition. Following the transition, parents reported that they were less involved and informed by the recipient school on their child's progress. Whilst, they felt that it was part of the progression to secondary school and their children could take the additional responsibility, they were keen to support were possible. In fact, the parents reported their interest in monitoring their child's academic progress and socio-emotional well-being. They were informed by the respective schools with regular reporting systems, though the quality of information varied between different schools.

Several parents remarked that they would approach a teacher / school should they have concerns on their child's progress. Few parents waited for the parent-teacher conferences that took place later during the scholastic year and some parents felt they were uninformed on their child's progress and wanted timelier opportunities to communicate with teachers. Some parents felt that not all schools communicated clear expectations to their children to develop the necessary skills (time management, study skills, data gathering, analysis, communication, decision-making and conflict resolution), and take responsibility for their learning.

In summary, although gifted students experienced high expectations from their parents, they considered their family environment positive, and felt that they were supported by them, helping in the development of positive attitudes and autonomy.

2.4.4.5 Leisure activities

Of the 14 identified papers for the narrative review, two papers by Arslan and Yukay Yüksel (2018) and Lam et al. (2018) included leisure activities of gifted students as part of their research. Arslan and Yukay Yüksel (2018) analysed the effect of self-perception on social

competence and antisocial behaviours with regard to the variables of gender, level of parental education, favourite leisure activities and daily duration of watching television. Findings indicated that gifted students who participated in educational and artistic activities, sports and games had higher self-perceptions. However, this study noted that the antisocial behaviours varied according to the leisure activity, such that students who preferred to play computer games and watch television were inclined to have higher antisocial behaviour scores than those students who preferred to play social games or engaged in artistic activities. It was concluded that as the duration of the television viewing increased, the positive self-perception decreased, but the social competence and anti-social behaviour remained the same about the duration of television viewing.

Lam et al (2018) analysis of the interviews with gifted students revealed that their schools nurtured their talents and provided them with the right challenges to enhance their learning interests, including extra-curricular activities such as sports, drama and talent competitions. They felt a strong belonging to the school, and that their schools provided enrichment activities and other opportunities to work on stimulating and creative tasks. The gifted students gave clear evidence that their school satisfaction was influenced by the possibility of pursuing their interests, developing their talents and creativity and they were being given the possibility of participating in extra-curricular activities.

2.4.5 Summary of results

Overall, the evidence included in this review suggested that gifted students were well accepted by their peers and were as socially adjusted as their non gifted peers (Arslan & Yukay Yüksel, 2018; Košir et al., 2016; Tereshchenko et al., 2019; Verschueren et al., 2019; Watts, 2020). When gifted students were challenged, encouraged and acknowledged for their efforts, in addition to establishing trusting relations with educators, this contributed to positive perceptions (Brigandi et al., 2018). Moreover, gifted students highlighted that a challenging and engaging curriculum facilitated their inclusion in a mixed ability class (Tereshchenko et al., 2019; Watts, 2020). Traditional teaching methods were not appealing but they preferred projects, inquiry-based learning tasks, creating and building things and discussions (Watts, 2020). Gifted and talented students claimed they experienced high expectations from their parents (Brigandi et al., 2018; de Souza Fleith, 2016; Lam et al., 2018;

Stoeger, Steinbach, Obergreisser, et al., 2014) but they confirmed the positive family environments and the supportive roles of their parents. Findings also suggested that gifted students who participated in educational and artistic, sports and games, had higher self-perceptions (Arslan & Yukay Yüksel, 2018).

2.4.6 Discussion of the findings

The focal point of this review aimed to answer the following question "For gifted students in mainstream schools, is there evidence to suggest that different classroom interventions are necessary when compared to their non gifted peers, affecting their learning experiences?" As specified in the introduction, gifted students have characteristics which may be addressed by a challenging and engaging curriculum. This may potentially lead to challenging behaviour, boredom, and underachievement. As corroborated in the results section, evidence indicated that gifted students preferred an appropriately challenging curriculum focusing on different learning styles, flexible group activities, discussions and collaborative problem-solving, especially with peers of similar ability. These findings demonstrated that strong relations and support from teachers, peers and their families influence gifted students' experience at school.

The discussion of the findings in the 14 identified papers for the narrative literature review will be presented in this section.

2.4.6.1 Social relations

The findings from the selected papers demonstrated that gifted students were well accepted by their peers and were as socially adjusted as their non gifted peers (Arslan & Yukay Yüksel, 2018; Košir et al., 2016; Tereshchenko et al., 2019; Verschueren et al., 2019; Watts, 2020). Gifted students felt they were more accepted by peers of similar cognitive ability (Brigandi et al., 2018) although some gifted students played down their ability to be accepted by their peers (Skelton et al., 2010). However, findings from other selected papers concluded that gifted students did not feel that their non gifted peers considered them different because they were gifted. In fact, gifted students felt included in mixed attainment classes and most recounted positive experiences (Tereshchenko et al., 2019). Other findings reported that gifted students were not always in accordance with their peers, however they used social coping strategies to resolve these conflicts (Lam et al., 2018). Findings also showed that gifted

students were less bullied (Ogurlu & Sarıçam, 2018) and less victimised (Pelchar & Bain, 2014) than their non gifted peers.

The analysis of the 14 selected papers clearly indicated that contrary to popular belief and even previous research (Carrington, 1993; Tannenbaum, 1962), gifted students were well accepted by their peers. The findings from one of the selected papers (Košir et al., 2016) indicated that there were no significant differences in social acceptance measures between gifted and non gifted students and that most gifted students were popular or average in the sociometric groups. This builds on earlier empirical literature (Neihart, 2002; Robinson, 2008), where it was found that gifted students were well accepted by their peers and at times, more popular than their non gifted peers.

These findings demonstrated that gifted students were socially adjusted as their non gifted peers and which concurred with Niehart's resilience hypothesis (2002) that being gifted does not put students at a greater risk of socio-emotional development. There are some researchers who reported that the gifted label can influence the gifted students' social interactions such that they perceive a lack of peer acceptance (Coleman & Cross, 1988; Gross, 2002). Other researchers argued that subgroups of gifted students may be at risk of social adjustment (Lajoie & Shore, 1981; Morelock & Feldman, 2003; Solano, 1987). Such a risk group could be gifted girls who scored lower on peer relations self-concept, compared to non gifted girls and boys and gifted boys.

The study by Košir et al. (2016) reported that the gifted girls had the lowest peer relations self-concept of all four groups even though they were still accepted by their peers. Possibly, gifted girls set high expectations of peer relations and high levels of perfectionism, indicating that gifted girls might be a risk group for social adjustment. These findings were also reported by Luftig & Nichols (1990), Baker (1996), Ziegler, Fidelman, Reutlinger, Neubauer and Heilmann (2010) and more recently by Guthrie (2020). Skelton et al (2010) selected paper also reported similar findings where some high ability girls were popular and could fit in the conventional interpretation and even found a balance between academic work and peer social relations. This resonated with the findings of Renold and Allen (2006, p. 470) that not all gifted girls had the necessary capabilities and aptitudes to achieve this balance, and found themselves adopting different approaches between "do girl" and "do success". This led to anxiety, rejection and separation experiences for gifted girls who opt for academic rather than

peer relations and most of them position themselves within the confines of the cultural norms of femininity.

Another study included in the narrative literature review (Arslan & Yukay Yüksel, 2018) confirmed that gender is a predictive factor of social skills and the social competence of girls was higher than that of boys, whereas the anti-social behaviour of boys was found to be higher than those of girls. This might be attributed to gender roles, personal characteristics and upbringing which may affect social skills and girls developing more prosocial behaviours. To support their findings, Arslan and Yukay Yüksel referred to Balyan, Yerlikaya Balyan, and Kiremitçi (2012), Deniz (2003), Dinçer (2015), Yurdakavuştu (2012). Then, according to Diener & Kim (2004), traditional childrearing techniques and playing games according to their genders may reinforce girls' development of better social skills. Superior social competences and better social integration were also associated with gifted girls (Endepohls-Ulpe & Ruf, 2006). Arslan and Yukay Yüksel (2018)'s study findings noted that self-perceptions, social competences, and anti-social behaviour of gifted students did not correlate to parents' education status. These findings were not in parallel with other research findings by Dilek and Aksoy (2013) and Dinçer (2015) and it was further explained that as the level of the parents' education increased, they were more likely to spend quality time with their children who developed a more positive self-perception and social skills improved.

The narrative literature review findings from Verschueren et al. (2019) indicated that gifted students felt they were more accepted by their peers with a higher means level of cognitive ability. This demonstrated that gifted students appeared to be more sensitive to the alignment of their attributes to those of the peer group norms which was in line with the person-group similarity model (Wright et al., 1986). Other research findings confirmed that gifted students were not only accepted by their non gifted peers, but even actually accepted better, by their teachers as well. An explanation given by Verschueren was similar to the explanation given by Gifford-Smith and Brownell, (2003) and (Rubin, Bukowski, & Bowker (2015) that gifted students had better levels of social cognitive abilities that enhanced peer acceptance and had lower levels of externalising behaviours that negatively affected peer acceptance. A more recent study by Weyns, Colpin, and Verschueren (2021) also confirmed these findings and explained that the intellectual abilities of gifted students enabled them to understand others and provided them with the necessary resilience in different situations.

This contradicted popular stereotypical beliefs among teachers and the media that gifted children were socially inept (Baudson & Preckel, 2013; Luftig & Nichols, 1990; Weyns, Preckel, et al., 2021).

Compared to peer groups, gifted students did not show lower feelings of social acceptance, which contrasted other research studies (Coleman et al., 2015). Verschueren et al. pointed out that these might be due to the different applied research methods. For instance, Verscheuren et al.'s study focused on Grade 6 students. They remarked that social acceptance may decline as the students grow up and they tend to value less the academic goals in peer groups (Galvan et al., 2011), and gifted students may become more aware of differences in norms and cultures of their peer groups (Coleman et al., 2015). This research also pointed out that gifted students nominated fewer peers as their friends, even if peers nominated them more as being their friends, demonstrating that the concept of friendship and expectations differed.

The findings from two other selected papers for the narrative literature review (Tereshchenko et al., 2019; Watts, 2020), reported that gifted students believed they were not considered different by their peers simply because they were gifted. Moreover, most had positive experiences in mixed attainment classes and felt included especially if they had a challenging and engaging curriculum. Similarly, another selected paper (Bicknell & Riley, 2013) reported that gifted students found their peers as support during school transitions especially if they had similar abilities / interests. These findings contrasted with other research findings which concluded that the gifted label had negative effects on gifted children because they felt socially stigmatised, developed anxiety, unrealistic self-esteem and excessive high expectations (Abu et al., 2017; Cross et al., 2003). The perceptions of gifted students presented in Tereshchenko et al.'s (2019) research drew on diverse issues in the wider social context behind egalitarian philosophies of mixed attainment. This had to be kept in mind together with the fact that gifted students were academically competitive and embraced a meritocratic opinion of education *i.e.*, equality of opportunity inferred that the potential of individual students were maximised according to their merit or abilities.

Another considered study was by Lam et al. (2018), who reported that gifted students were not always in accordance with their peers and used social coping strategies to resolve these conflicts. The gifted students valued peers who were motivated to achieve, had common

goals, and shared similar interests to improve on their skills / knowledge and also contribute to build up an affiliation with the school. This was also echoed in another considered study (Brigandi et al., 2018) in which gifted students also highlighted that working with similar ability peers contributed to positive perceptions of environmental factors and valued these relationships especially to accomplish their goals and perseverance. The gifted students did not perceive working together with their mainstream peers since they described them, *inter alia*, as not paying attention, cannot manage time, do not care, and do not listen.

This contrasted greatly with the findings of two of the selected papers for the narrative review (Tereshchenko et al., 2019; Watts, 2020), where the gifted students felt they were supported by their peers in mixed attainment classes and even had positive experiences and felt included. There were other research findings (Cross & Swiatek, 2009; Foust et al., 2009; Gross, 2006) which supported the claim that gifted students benefited more from homogenous grouping. Another study was conducted by Leavitt and Linke (2016) to determine whether the levels of achievement of gifted students increased when learning with similar ability peers for, at least, part of the school day. This had a positive impact on the gifted students' social interactions, sense of belonging, with no signs of being emotionally threatened, and they could engage in healthy competition (Mullet et al., 2018). Cross (2011, pp. 14-15) asserted that gifted students may experience "emotional distress" should they spend their full day at school with peers of similar ability. It was further explained that on a longer term, they will eventually be unable to interact with the diversity of society.

Laninga-Wijnen et al. (2019) offered an explanation based on the reputational salience hypothesis (Hartup, 1996). According to this hypothesis, strength and direction of the friendship selection process for academic achievement are indicators of popular and unpopular norms in class. Therefore, in classes where popular students were high academic achievers, it was most likely that the other high and low academic achievers chose each other, based on similarity in achievement. On the other hand, in classes where high academic achievers were unpopular, low achieving students selected peers of similar ability as friends whilst high academic achievers avoided choosing peers of similar academic ability as friends. This research highlighted that popularity and unpopularity norms appeared to play an important role in the friendship selection bias in classes *i.e.,* in classes where achievement

was relevant and important and associated with either popularity or unpopularity (reputational salience hypothesis), peers preferred friends of similar academic achievements.

Two other selected papers for the narrative review researched bullying and victimisation in gifted students (Ogurlu & Sarıçam, 2018; Pelchar & Bain, 2014). Ogurlu and Sarıçam (2018) research reported that gifted students were bullied less than their non gifted peers. Several researchers (Christie-Mizell, 2003; Kaukiainen et al., 2002; Roeleveld, 2011) pointed out that a positive self-concept protects against bullying. Shechtman and Silektor (2012), went a step further to explain that gifted students exhibited higher empathy, higher academic self-concept, and lacked emotional anxiety when compared to their non gifted peers that may help them to be less bullied than their peers. Peer victimisation, which was higher for gifted students than their non gifted peers, was attributed to the possibility that gifted students tend to internalise their feelings, may have less social relations with peers, may not share the same interests as peers, and their giftedness is perceived negatively by their peers. This finding supported that of Peterson & Ray (2006) and Swearer and Cary (2003) who submitted that being gifted may lead to bullying because of the good grades and being diverse from their peers. A more recent study by Bergold, Kasper, Wendt, and Steinmayr (2020) has shown that high achieving and low achieving boys were at a significantly higher risk of being bullied than girls presenting similar abilities. Other studies identified additional factors that affected the peer victimisation of gifted students. These factors included their tendency to internalise (Rodkin & Hodges, 2003), a perception that their non gifted peers and teachers considered giftedness negatively (Cross et al., 1993), and that they were more likely to experience isolation because of the lack of common interests with their non gifted peers (Vialle et al., 2007).

Another selected paper for the narrative literature review (Pelchar & Bain, 2014) claimed that during school transitions, there were strong correlations between victimisation and levels of internalising distress, and between bullying and externalising distress. This reflected findings in earlier research (Arseneault et al., 2006; Holt et al., 2007). Research carried out by Peterson and Ray (2006) confirmed that gifted students may be perpetrators and subject to distress and their bullying and victimisation could even lead to violent contemplations. Although transitions can be stressful for all students, Pelchar and Bain (2014) findings could not support the claim that gifted students were victimised more frequently than their non gifted peers; a

finding which did not support Cross (2001) findings. Pepperell and Rubel's (2009) potential explanation for this was that gifted students may have the resilient qualities for transitions.

Ogurlu and Sarıçam's (2018) study, included for the narrative literature review, showed that gifted boys had more peer bullying levels and gifted females had more peer victim levels than gifted boys. These findings reflected the findings of prior researchers where it was concluded that boys were more likely to bully, but not consistent with other research on victimisation on males (Farrington & David, 2000; Garandeau & Cillessen, 2006; Liang et al., 2007; Yang et al., 2006). Stereotypically boys were associated with aggressive behaviours and violence and victimisation was associated with girls. Bullying being negatively correlated with victimisation, submissive behaviours and forgiveness was another finding in Ogurlu and Sarıçam's research although submissive behaviours were related positively to victimisation and forgiveness in gifted students. This was confirmed in previous studies (Atik et al., 2012; Peker et al., 2012; Perren & Alsaker, 2006; Schwartz et al., 2002). Forgiveness was related to conflict resolution and was considered as a positive social behaviour and important to restore interpersonal behaviours. Bullying was a negative behaviour causing negative outcomes such as conflict, strain and manipulation (Baskin & Enright, 2004; Worthington Jr., 2006). Clark (2013) contributed her thoughts and explained that this may be due to gifted students' being highly sensitive, empathic and showed compassion towards others in conjunction with their quest for values and morals.

2.4.6.2 Teacher – student relation

The findings from the selected papers for the narrative literature review demonstrated that gifted students benefited from teachers who were trained in inclusive education, nurtured affective and cognitive development, and designed learning environments that effectively supported their needs (Brigandi et al., 2018). For instance, several gifted students described good relations with their teachers (Lam et al., 2018) and sought their support academically and emotionally. Two other selected papers (Skelton et al., 2010; Watts, 2020) reported that the perceptions of gifted students were not always positive with their teachers. Other findings revealed that teachers' attitudes and characteristics could support the achievements of gifted students (Bicknell & Riley, 2013; Stoeger, Steinbach, Obergreisser, et al., 2014).

In two of the selected papers (Brigandi et al., 2018; Lam et al., 2018), gifted students' descriptions on how the enrichment teacher's supportive behaviour sustained their affective

and cognitive development and self-regulation, were consistent with other research findings that had concluded that teachers' support at school appeared to influence school satisfaction (Danielsen et al., 2009) and enhance student engagement (Havik & Westergard, 2020). One of the selected papers (Lam et al., 2018) established that students considered their teachers as supportive when they showed real concerns for them, used differentiated strategies, acknowledged their successes, and implemented fairness with all students. However, their paper raised cultural differences between the Eastern and Western worlds; their study was carried out with gifted Chinese students in Hong Kong, where authoritarian teachers and pressures were considered positive in terms of support and motivation.

Contrastingly, in Western culture, a controlling teacher may negatively affect the students' perception of school satisfaction and motivation (Ho, 2001). Looking at this from a social constructivist philosophy, teachers do not operate in a vacuum; rather they are influenced by the social and cultural setting in which they operate. What applies for the teachers, is equally valid to the student – their personal experiences and cultural contexts will also have an influential bearing on their learning experiences (Zhu et al., 2008).

Other research findings demonstrated that teachers for gifted students need to have an array of characteristics to connect with the students, including being sensitive to students' differences, adopting positive attitudes towards gifted students, and other personality characteristics, including a sense of humour, being knowledgeable and enthusiastic on their subject and teaching (Stephens, 2019; Vidergor, 2015), caring, and supportive (Johnson, 2009; Stipek, 2006). Teachers can have social influences on their students, affecting their academic, social and psychological development (Roorda et al., 2011). This was also stated by Winston (2013) who explained that students' motivation is negatively affected when they perceive that teachers do not care about them. In fact, a study carried out by Bokhorst, Sumter and Westenberg, (2010) reported that when positive student-teacher relationships were acknowledged by students, this helped them feel they were in a safe environment, which had a positive effect on their learning and motivational outcomes. This had also been confirmed previously by Seligman (2007) who submitted that a good teacher – student relationship contributes to a positive learning environment, and the students will venture to attempt all types of learning activities.

The findings of another selected paper for the narrative literature review (Skelton et al., 2010) were based on the notion that since boys needed more support from teachers, this has led the latter to give the former more attention, more detailed instructions to solve problems and respond more often to boys than girls in class (Sadker & Sadker, 1985). Teachers have been found to believe that gifted boys have an innate ability, whereas gifted girls had to study harder, and tend to expect less from girls than boys with the possibility that gifted girls may internalise these lower expectations (Reis, 2002). Research revealed that gifted girls expressed their frustrations when their efforts were not acknowledged by their teachers. Earlier research by Smutny (2003) and Walkerdine, Lucey and Melody (2001) had reported that gifted girls seemed to have lower levels of self-confidence and communicate more anxiety on their performance than boys, who may need a more understanding teacher to support their well-being. This was also reflected in the selected paper interview excerpts (Skelton et al., 2010, p. 190).

"I have my hand up…she won't bother because she'll know I can do it."

"…I remember my maths teacher and she said that she doesn't even look at the homework but just throws it away afterwards…"

A more recent study by (Bakx, Van Houtert, Brand, & Hornstra (2019) confirmed that gifted girls felt it was very important that their teachers attuned to their needs, to listen and understand their needs. The focus on boys as underachievers and girls as 'ideal students', drove teachers to consider gifted girls as being capable of navigating through the educational system and acquire the necessary qualifications and cultural capital for their future. There was concern that these high expectations may lead to what was referred to *super-woman syndrome* (Callahan, 1994). He explained that gifted girls were expected not only to excel academically, but also participate in multiple extra-curricular activities, contribute their time at home, and earn scholarships. The identified paper (Skelton et al., 2010) maintained that school experiences of gifted girls continued to be constrained by gender.

Conversely, another selected paper (Watts, 2020) demonstrated through the findings and observations that gifted boys did not receive additional support from their teachers. The expectations from their teachers that gifted boys understood every subject easily, and the shame and frustrations and the overgeneralisation this created, demonstrated that guidance

and support were required. Gifted boys were keen to maintain their academic status and wanted discrete support from their teachers. These students were disheartened when their behaviours were considered as defiance or disobedience and felt that their teachers' behavioural expectations were as high as their academic expectations. This was also confirmed by Baudson and Preckel (2016) whose research confirmed that the misconceptions which teachers had on gifted students, and the lack of understanding on how to teach them may, increase the risk of unwanted behaviours. This was also substantiated by Heyder, Bergold, and Steinmayr (2018) who highlighted that the higher the misconceptions held by the teachers, the more negative their attitude would be on nurturing gifted students. Interestingly, Peterson (2011) described that positive teacher attitudes can assist in developing supportive relationships and encourage gifted students on the fact that they feel different from others.

Research to explore whether stereotypes associated with gifted students affected teachers' attitudes towards the academic accomplishment, *vis-à-vis* assumptions on their behaviour, revealed that teachers tend to focus more on the boys' negative behaviour, rather than their positive behaviour (Preckel et al., 2015). More recent findings by Matheis, Keller, Kronborg, Schmitt, and Preckel (2020) established that pre-service teachers perceived gifted boys and girls as equally more maladjusted than their non gifted peers, however the teachers' confidence in teaching gifted students and their enjoyment of interacting with them was associated with the beliefs they held on these students. In fact, Cleveland (2011) had cautioned that teachers need to set up safe classrooms that were supportive and respectful to all students, irrespective of their intelligence level.

The findings of another identified paper (Stoeger, Steinbach, Obergreisser, et al., 2014) indicated this. When teachers exhibited high levels of commitment, set appropriate goals, and learning strategies and monitored the strategies, they could potentially compensate and contribute more than individual moderators for young, gifted students to transform potential into achievement. This was also confirmed by other researchers (Stronge et al., 2007; Wayne & Youngs, 2003; Wright et al., 1997). However, this does not imply that individual moderators are meaningless, since this has also been substantiated in other studies (Covington, 2000; Dignath et al., 2008). Stoeger et al study confirms that for primary school children advantageous environmental motivators (teachers and family) may counteract negative

individual motivators. The teacher is considered a "central transformative force in bridging the gap between primary and secondary school" (Pietarinen, 2000, p. 383). This was reflected in the findings of another selected paper (Bicknell & Riley, 2013) which showed that the school teachers' guidance and support to develop necessary coping skills for students could improve their transition from primary to intermediate/ secondary. This concurred with other studies, whose findings suggested that necessary coping skills for a successful transition were necessary (Schumacker & Sayler, 1995) and teachers were not prepared for providing this support for a seamless transition (Hawk & Hill, 2001). Gifted students were also unaware of educational outcomes and even commented that they were not prepared for the little fish in a big pond effect.

2.4.6.3 Teaching and learning experiences

Two of the selected papers (Tereshchenko et al., 2019; Watts, 2020) specifically reported on the challenges gifted students experience at school such as, the importance of having a challenging and engaging curriculum, negative behaviours from other students and having appropriate teaching approaches and content. Three of the selected papers (Brigandi et al., 2018; de Souza Fleith, 2016; Lam et al., 2018) reported on the classroom climate that influence the satisfaction experienced at school of gifted students and the personal and environmental factors influencing it. Another paper (Kanevsky, 2015) reported that most gifted students prefer to work on their own if working with others was not attractive to them. They preferred to choose their group and work with peers who learn at the same rate. One of the selected papers reported that gifted students felt prepared for transitions from one school to another (Bicknell & Riley, 2013) whilst another one reported gifted students had a higher academic and general self-concept than their non gifted peers (Košir et al., 2016).

Two of the selected papers (Tereshchenko et al., 2019; Watts, 2020) highlighted the challenges which, gifted students encountered in mixed ability classrooms, namely lack of challenging activities, with lessons described as 'boring', 'dull', 'slow' and 'not challenging enough', and lack of variation in teaching approaches and content. This led gifted students to finish their work earlier and, feeling that either their academic or social needs were being neglected, they found ways of occupying themselves, leading to behaviours that were misinterpreted by their teachers (Watts, 2020). This corroborated with previous research findings by Preckel et al. (2015), who had investigated whether teachers' attitudes were

affected by stereotypes about gifted students concerning their academic accomplishments as opposed to assumptions about their behaviours. They found that in line with the disharmony hypothesis, teachers focused more on the gifted boys' negative behaviours. There are various possible explanations. For instance, media's presentation of gifted individuals (in particular males) reflects the disharmony hypothesis (Vialle, 2007), teachers' lack of understanding on how to teach these learners (Baudson & Preckel, 2016) and that teachers' expectations for the behaviour of these students were focused on their academic competences rather than social maturity (Hamilton & Roberts, 2017). De Souza Fleith (2016) made reference to a 2007 study by Alencar to explain that gifted students' academic performance may be held back if they experience low motivation, boredom, and lack of challenges at school because they start losing interest, fail to co-operate and do not participate in class. This tendency reflected the findings of Obergriesser and Stoeger (2015) on gifted students which stated that boredom may lead to underachievement at school.

Several studies have shown that gifted students lacked challenge in mixed attainment classrooms and feel bored, finish before their peers, find lessons repetitive (Rubin, 2008) and that there was lack of variation in teaching approaches and content (Ball, 1981). The most common activities in mainstream classes mainly focused on memory recall, structure, objective fact-learning and group projects, which did not fulfil the learning needs of gifted students (Gómez-Arizaga et al., 2016). These concerns were reported as an acknowledged challenge to meet the diverse needs of students in mixed-attainment classes (Hart, 1992). This was consistent with other research that found that whenever differentiation occurred, it focused on students with lower ability rather than gifted students (Brighton et al., 2005; Plucker & Callahan, 2014). Some teachers had been trained to implement a deficit-approach to teaching and planned for students with lower ability but had little time for challenging gifted learners (Acee et al., 2010; Bristol, 2015; Kanevsky, 2011).

Conversely, Yonezawa, Wells, and Serna (2002, p. 52) argued that labelled gifted elementary students "develop a habitus of entitlement". Crozier, and James's (2011) investigation on the identity and formation of identity among white middle-class students reported a sense of superiority and entitlement for gifted students and their parents and rejected working class peers. This was supported by the findings of one of the selected papers (Tereshchenko et al., 2019) which showed how gifted students reported that their individual progress was limited

and claimed that the negative behaviours of their peers was distracting and affecting their entitlement. However, this paper had also established that 51% of the gifted students participating in this study communicated positive views about mixed attainment classes, drawing on equity discourses and equality of opportunities, commensurate with one's abilities. This resonated with earlier research by Ireson and Hallam (2001) where the majority of students spoke favourably of mixed attainment for social inclusion and equality of opportunity in mixed attainment classes.

Contrastingly, the selected paper (Tereshchenko et al., 2019) reported that 41% of average ability students had positive views on mixed attainment grouping that focused only on their benefits for their own learning and felt that they had a place in the ability order of the school. However, the belief that this status could be lost, contributed to 45% of average ability peers expressing negative views, claiming reduced academic and self-concept in mixed attainment classes, which was mainly due to their constant comparison with gifted students and peer tutoring by gifted students. This was also identified in a previous study by Hallam and Irseson (2006) who discussed how the negative views held by average ability peers for mixed attainment was shaped by their anxiety of losing their status within the ability hierarchy. Moreover, peer tutoring, which was commonly adopted in classrooms, could decrease self-confidence and enhance labelling and rivalry with gifted students. As Roberts (2016, p. 44) eloquently pointed out, 'the more capable peer' was utilised as "a co-collaborator in the learning process," rather than being a teacher for those of lower capabilities. This concurred with the findings of another identified paper (Košir et al., 2016) which claimed that gifted students had higher academic and general self-concept than their non gifted peers, and gifted students perceived their academic abilities to be higher than those of their peers. These findings were coherent with Litster and Roberts (2011).

Three of the selected papers reported on research on how classroom climate influences the satisfaction of gifted students at school (Brigandi et al., 2018; de Souza Fleith, 2016; Lam et al., 2018). De Souza Fleith's (2016) established that gifted students presented a higher mean score on intrinsic motivation, whereas non gifted peers were more extrinsically motivated than gifted students, who perceived themselves more creative. It was outlined that there was a positive correlation between classroom climate which encouraged creativity and intrinsic motivation, but no correlation between the climate of the classroom (which

encouraged creativity) and extrinsic motivation. This pointed to similarities with theoretical models for creativity, which highlight the interrelationship between intrinsic motivation and creativity (Amabile, 1996; Csikszentmihalyi, 1996, 2014; Sternberg & Lubart, 1991). This must be seen in the light of curriculum changes, that may be necessary in schools to provide gifted students with choices, appropriate challenges, and relevant curricula to nurture their learning and creativity, rather than having an inflexible education system, with an emphasis on rote learning and students' expected compliance and passiveness (de Souza Fleith, 2016).

Personal and environmental factors that affect gifted students' school satisfaction were explored in one of the identified papers (Lam et al., 2018). However, the researchers highlighted that school satisfaction was affected by cultural factors and therefore may vary among Eastern and Western students. The study reported that the personal attribute mostly associated with gifted Chinese students was 'hope', interpreted in the study as 'goals and aspirations for the future' (Lam et al., 2018, p. 177). Therefore, students had high levels of satisfaction when their hopes and aspirations were being met at school. This reflected Snyder's 'hope theory' (2000), that when goals, combined with goal-oriented motivation and thoughts, are supported and encouraged, they will lead to accomplishment and satisfaction. An important finding in Lam's study was that school satisfaction was not only dependent on academic success, but also on other talents and / or interests that the students wanted to develop, showing that the personal factors of self-discipline and goal-directed thoughts increased school satisfaction.

The environmental factors that influenced school satisfaction for gifted students were similar for two of the selected papers (Brigandi et al., 2018; Lam et al., 2018) where teachers, peers, and family (discussed in other sections of this discussion) all played an important role. The role of mentors was also identified as an environmental factor that influenced school satisfaction (Brigandi et al., 2018), especially when there was emotional as well as academic support in the student-mentor relationship. Baum, Schader, and Hébert (2014) had also attributed attainment of advanced skills, and promotion of an enduring relationship with potential career prospects, with effective student-mentor relationships.

Positive challenging learning environments, which satisfied the cognitive needs of gifted students and positively influence school satisfaction, were also highlighted in two of the identified studies (Brigandi et al., 2018; Watts, 2020). Willis (2007) had asserted that an

appropriately challenging curriculum motivates gifted students by sustaining their academic and psychological needs. This optimal level of challenge was described as the Zone of Proximal Development (Vygotsky, 1962), however several researchers (Gallagher et al., 1997; Kanevsky & Keighley, 2003; Rogers, 2007) have argued that because of the limited challenging tasks at school, most gifted students rarely move in the ZPD. Gifted students were at risk of acquiring negative attitudes and behaviours when they remained unchallenged (Schuler, 2002; Speirs Neumeister, 2004; Speirs Neumeister et al., 2009) A more recent study by Brigandi, Siegle, Weiner, Gubbins, and Little (2016) demonstrated that gifted students considered learning as beneficial, enjoyable and would sustain their interest in the topic, to remain engaged in learning when it was related to their interests and / or related to perceptions of identity. Conversely, they would lose their motivation when the class curriculum is either not appealing or insignificant to the students. This built on the findings of Phillips and Lindsay (2006) who had submitted that the provision of learning opportunities designed on learning pace and interests to gifted students were important factors to maintain their motivation.

There are various research studies on gifted students' preference to work alone or in groups. Dunn and Price (1980) and Samardzija and Peterson (2015) pointed out that gifted students preferred to work in groups rather than alone. Contrastingly, there were long standing assumptions that gifted students preferred to work alone. Davis and Rimm (2005) (and more recently Freedberg, Bondie, Zusho, & Allison (2019)) asserted that gifted students preferred to work either alone or with other gifted students, rather than their non gifted peers. French et al (2011) research study also confirmed that gifted students preferred to work alone, however when they feel supported by the teachers and / or peers, they would prefer to work in a group.

A more recent study by Walker and Shore (2015) heightened that gifted students preferred to work with others, however these preferences were multifaceted and depended on the learning situation. This concurs with the findings of one of the selected papers (Kanevsky, 2015) who researched the preference of gifted students at different ages and their preference to work with / without their peers. Kanvesky (2015) observed that they preferred to work on their own, when working with others was not attractive, unless they could choose their group, work with peers who learn at the same rate and the nature of the task was to their interest.

There were no statistically significant gender differences when responses of boys and girls were compared. This was also consistent with the results of other studies (Ewing & Yong, 1992; Hlawaty, 2009; Yong & McIntyre, 1992) albeit contrasting with other research studies which did identify gender differences (French et al., 2011; Pyryt et al., 1998; Ristow et al., 1985). Kanevsky (2015) provided explanations on the findings of studies, which had identified differences in feelings on learning between boys and girls with and without peers. She attributed these differences to the data collection instruments, samples, school contexts and analysis used in her study, which were different than those used in the other studies and therefore could possibly be more sensitive to gender differences.

Only one identified study on transitions of gifted students (Bicknell & Riley, 2013) reported that gifted students felt prepared for the systematic and organisational changes by virtue of the orientation visits, school prospectus and information obtained from siblings and peers. This concurred with the findings of other research studies, which identified successful systemic transitions to be positively correlated to the number of siblings who attended or were attending the reception school (Anderson et al., 2000). Siblings were instrumental in relieving the anxiety of gifted students which was triggered by wearing the school uniforms, use of lockers, textbooks and other school related practices and routines. Although gifted students felt academically prepared for the recipient school, they were nonetheless concerned on subject continuity and preparedness for certain topics. This sustained the argument by Galton, Morrison, and Pell (2000) on the fresh start policy based on the reasoning that secondary school specialist teachers can determine a student's ability in their particular subject better and the objectives of the secondary school were more academically specific. In fact, Galton and Hargreaves (2002) questioned whether curriculum continuity was genuinely considered as an achievable goal. Another finding by Bicknell and Riley (2013) was that students were not prepared to be a little fish in a big pond. These students suddenly found themselves in a bigger pool of gifted students and they felt they had to work harder to do well and keep their place in class. Marsh and Hau (2003) cautioned that this can have negative effects on the self-concept of these gifted students such that these students would be average or below average in terms of academic achievement (in the bigger pool).

2.4.6.4 Family relations

Four of the five studies which covered family relations in the narrative literature review (Brigandi et al., 2018; de Souza Fleith, 2016; Lam et al., 2018; Stoeger, Steinbach, Obergreisser, et al., 2014) highlighted positive family environments and the supportive role of parents in the experiences of gifted students at school. The gifted students described their parents as receptive to their needs and supported them academically and in non-academic situations, helping them develop positive attitudes, autonomy, and independence. Parents of gifted students also felt that once their children transitioned from primary schools, they were less informed and involved in their child's progress by the recipient school, however they were keen to support where possible (Bicknell & Riley, 2013).

One paper that was included in the narrative literature review indicated that parental support helped gifted students develop positive attitudes (Brigandi et al., 2018), supported by parental warmth and receptiveness, intellectual stimulation and discipline when necessary (Chase-Lansdale & Pittman, 2002). Brigandi's finding also reinforced prior research (Maccoby, 2000) that parents influenced developmental outcomes in their children. Secure attachments within the family structure supported a resilient emotional base to develop healthy relationships (Cassidy & Shaver, 1999). This was also identified in another paper that was included in the narrative review (de Souza Fleith, 2016) where the findings on the family environment for both the gifted and non gifted students were of good quality family interactions. The students' described family relations as harmonious, supportive, exhibited affection with few divergences. The only statistically significant differences seen was the use of physical punishment by parent/s of the non gifted students, whereas parents of gifted students were resilient rather than authoritarian. To support these findings, De Souza Fleith referred to Aspesi (2007) findings who described families of gifted children as concordant, supportive and had less conflicts when compared with non gifted children. The families of gifted children encouraged independence and autonomy in their children. This was also reflected in previous research findings which confirmed the significant role of parents to support the development of giftedness in their children (Aspesi & Fleith, 2006; Chagas & Fleith, 2009) and who set high accomplishment levels (Winner, 1996). Other research findings concluded that parents of gifted children were constantly involved, supported their children's interest, encouraged independence, had open clear communication channels and used less

punishment with their children (Olszewski-Kubilius, 2008; Rudasill et al., 2013). Along the same lines, gifted students rated their families as cohesive, flexible, supportive and caring with a balance between independence and closeness and discipline and autonomy (Olszewski-Kubilius et al., 2014).

Another paper also included in the narrative review (Stoeger, Steinbach, Obergreisser, et al., 2014) reported that families of gifted students had positive family environments especially when it came to support learning, and assist with homework. These findings were confirmed by the parents of gifted students who reported high levels of autonomy-supportive instruction and low level of controlling instruction, self-efficacy for homework assistance and reported low levels of conflicts about homework with their children. The involvement of families of gifted students in their children's learning activities and homework was in line with other research studies (Fan & Chen, 2001; Jones & Prinz, 2005; Patall et al., 2008). Stoeger et al. (2014) also reported that the familial cultural capital (reading motivation, number of books at home and parents educational background) had a positive impact on the students' attainments. This position was also supported by other studies (Lee & Bowen, 2006; McElvany et al., 2009). In fact, social class and gifted students were correlated in research (Jolly & Matthews, 2012). Corbett and Corbett (2018) drew on Bourdieu's work to explain that the social class background of gifted children also needed to be considered. They argued that middle class parents / guardians could provide opportunities to their children including accessibility to learning, travelling opportunities, cultural events, and observing and living with literate family members. This supported Vialle (2017) study on the importance of environmental and intrapersonal catalysts that shape a child's developmental process. This study also highlighted the consideration that these catalysts are dynamic and interactive and vary according to the distinctive circumstance of each family's access to the educational and learning resources.

It is important to highlight that family support differed within various cultures. One of the selected papers in the narrative literature review (Lam et al., 2018) reported on a study in Hong Kong with gifted Chinese students. Whereas reports in literature claimed that high parental expectations may exert pressure on the gifted students (David, 2018) which in turn, may lead to students not performing well and also affecting their enjoyment at school, the participants of Lam's study reported that their parents' high expectations motivated them to

accomplish for themselves, but also for their parents. The gifted students felt that their parents supported their learning in several ways including emotionally, instrumentally and/or financially, helping them cope with the academic tensions and feel fulfilled with their learning. This cultural difference in parenting was explained by Wu and Chao (2005) where the warmth and support perceived by Chinese youths may have not been the same as that perceived by Western youths, which is often distinguished as being explicit and directly expressive. Chinese youths reported that parental support was assumed to be there and may take the form of instrumental, economic support or parental sacrifices (Russell et al., 2010).

The last paper considered in the narrative review (Bicknell & Riley, 2013) addressed family support, specifically during school transitions of gifted students. Some parents felt that not all schools communicated clear expectations with their children to develop the necessary skills (time management, study skills, data gathering, analysis, communication, decision-making and conflict resolution) and took responsibility for their learning. This aligned with another study (Hawk & Hill, 2001) that reported on the lack of preparation by schools to support students in making a smooth transition to secondary school.

Following the transition, parents reported that although they were keen to support where possible, they were less involved and informed by the recipient school on their child's progress. Dauber, Alexander, and Entwistle (1996) and Mizelle (2005) reported on these lines, stating that parental support was recognised to be a key factor for successful transition. Parents' interests in the monitoring of their child's academic progress and socio-emotional well-being was another finding in the selected paper. This was important - a study carried out by Jindal-Snape and Foggie (2008) demonstrated that as students transition from one school to another, this creates a socio-emotional impact, however students who were independent, resilient to change and make friends easily are able to make a smooth transition.

2.4.6.5 Leisure activities

There were only two identified papers (Lam et al., 2018; Yüksel & Arslan, 2018) that discussed leisure activities by gifted students. Findings indicated that gifted students who participated in educational and artistic activities, sports and games had higher self-perceptions, however antisocial behaviour varied according to the leisure activity (Yüksel & Arslan, 2018). Gifted students felt a strong belonging to the school when extra-curricular activities that satisfied

their interest and possibility to work on stimulating and creative tasks to develop their talents, were provided (Lam et al., 2018).

Research has demonstrated that when students participate in extracurricular activities, engagement, performance and attitude towards school were enhanced (Dotterer et al., 2007; Marsh, 1992). Yüksel and Arslan's (2018) study highlighted that gifted students who preferred to play computer games and watch television were prone to have higher antisocial behaviour than those who preferred to play social games or engaged in artistic activities. Arslan and Yukay Yüksel (2018) referred to the findings of a study by Yavuzer (2000), who had reported that active physical activities had a positive effect on self-perception, whilst the misuse of computers had a negative effect on self-perception. Akpinar (2004) was also referred. Akpinar had reported that watching more than two hours of television may have a negative effect. This contrasted with literature that demonstrated gaming activities and other inactive leisure activities to potentially enhance positive social skills (Saracho, 1998), mental health and well-being, if they were well-developed and guided appropriately.

Lam et al. (2018) study demonstrated that academic excellence was not the only factor affecting school satisfaction, but extra-curricular activities helped build a sense of belonging with the school. The gifted students viewed these activities as contributing to school satisfaction and perceived them to stretch them further and develop other talents. This resonated with other similar research findings where extra-curricular activities (Se-Hyuk & Youngshim, 2018), and physically active leisure activities could potentially be a buffer for academic stress (Aaltonen et al., 2016).

2.4.7 Limitations and strengths of this narrative review

There was not one common definition of gifted and talented students in the 14 selected studies. Identification methods varied across some papers; others either provided no information on the selection criteria or relied on the school for identification. Some considered either IQ or academic performance. Therefore, the heterogeneity of the definition of gifted students across the studies need to be highlighted given that these impact on the identification, research findings and generalisability of the research.

Three of the studies included in this systematic narrative review were conducted in Europe, two in the UK, three in the USA, two in Turkey and one in the USA, Canada, New Zealand, Brazil and Hong Kong. Therefore, caution must be exercised to the generalisation of the conclusion of this review to an international cohort. The data subjects participating in these studies came from different cultures and educational systems, posing a further limitation on the objective of the study because it limited the possibility of comparisons. Other limitations included small sample sizes and lack of comparison groups with their non gifted peers. Furthermore, useful studies may have not been considered due to the inclusion and exclusion criteria used. An approach was adopted to maintain a balance between keeping the eligibility criteria wide enough to include the diversity of studies but narrow to focus the studies being considered (O'Conner et al., 2011). For instance, this review focused on the learning experiences of gifted students; what works for them in mainstream classes, identification of what supports their classroom learning, their personal characteristics, their social relations, and the support required to learn (peers, teachers, and family). Studies that did not relate to learning experiences in mainstream classes were excluded to focus the research. There may have been other articles in other databases, which have not been included in the search strategy (for instance, articles not written in the English language). Abstracts and full articles were read by the researcher and although special care was taken to keep with the eligibility criteria, there may have been articles that were inadvertently excluded, albeit relevant to the learning experiences of gifted students.

2.5 Future research and recommendations

Key recommendations for future research may be made, based on the key issues identified in this literature review. Ideally, future studies should come to an agreement on a clear definition of giftedness, which would improve the validity of the research (Carman, 2013). The data collected should include larger, more ethnically diverse and representative samples to include twice exceptional students and minority students so that results are more generalisable. Controls matched on, *inter alia*, age, gender, race should be included in the studies and longitudinal research should also be considered to follow up on gifted students during the entire course of their schooling. It is essential that there is an improvement in the

quality of research design and reporting if research in the field of giftedness is required to influence practice.

The studies eligible for this narrative literature review were equally qualitative and quantitative, although it is not the scope of this paper to debate qualitative *versus* quantitative methodologies. Through this narrative literature review, it was observed that qualitative methods were mostly limited to interviews. Future research may consider other qualitative data collection methods such as focus groups which may provide reassurance to some participants, reduce power disparity and offer a relaxed environment for participation (Punch, 2002) and observations, which may verify responses collected through interviews. Less than a quarter (n=3) of the selected papers considered multiple stakeholders *e.g.*, parents / students / teachers. All the other identified papers considered the students only and therefore future research may consider including the views of multiple stakeholders.

The current research on gifted students focused either on intellectual or academic giftedness. Students who are gifted in other areas such as arts, creativity or physical domains are not included in most studies and their learning experiences never sought. Consequently, selection of participants for future research should not be solely based on those who either attend gifted programmes or do well academically, but also by means of cognitive ability tests, as part of a multidimensional multi-informant selection process (Ambrose & Machek, 2015; Peters S. J. et al., 2020; Worrell & Erwin, 2011).

Future research should consider the relationship of other indicators of gifted student learning experiences, for effective understanding of their learning experiences and the necessary planning for their holistic development. This review set out to identify the experiences of gifted students and support their development. To provide focus to the research, studies that did not relate to the learning experiences were excluded. However, it was interesting to note that the review revealed other aspects that influenced the learning experiences beyond the immediate mainstream class including family support, relations with peers, support from siblings and relations with teachers beyond the delivery of the curriculum.

The narrative literature review has identified gaps in the literature related to the learning experiences of gifted students that need to be addressed. These included career choices and

types of leisure activities that gifted students have, as compared to non gifted peers. These aspects have been included in the main study interview schedule of this research.

2.6 Contribution to the research study

The researcher has come across studies, which explored the learning experiences of gifted students (Bergold, Wirthwein, et al., 2020b; Gomez-Arizaga et al., 2020; Samardzija & Peterson, 2015; Skelton et al., 2010), but did not come across evidence of recent narrative literature reviews that synthesised this information; albeit very close, the examination of literature in Reis and Renzulli (2010) on gifted education and the learning experiences of gifted students at school, has not been classified as a narrative literature review.

The narrative literature review, which has been carried out for the purpose of this study, has therefore synthesised this information for the first time and its results enabled the researcher to formulate the interview questions in the main study. Moreover, the process has exposed areas which required further research, to gain a more comprehensive description of the phenomenon. For instance, considering that gifted students belong to a non homogenous population, the researcher has identified areas (such as career choices, leisure activities, and how these experiences are embedded in their respective social fabric), where a deeper inquiry is necessary. This necessity was critical to the researcher because she believed that by ignoring these areas, she would not have gained a holistic representation of the students' learning experiences. Therefore, her concern was that by ignoring them, she would have risked the decontextualising of the students from the social world in which they live, thereby compromising her understanding of their world.

2.7 Conclusions

The reviewed literature has highlighted that gifted students are well adapted and as socially adjusted as their non gifted peers. Gifted students benefit from trained teachers who can nurture their affective and cognitive development and provide them with a challenging and engaging curriculum and appropriate teaching approaches that suit their learning needs. Positive family environments are important and the supportive role of families in academic and non-academic situations helped gifted students develop a positive attitude, autonomy

and independence. There seems to be a gap in research when it comes to career choices and leisure activities for gifted students, however findings from the few research studies identified, demonstrated that such activities enhanced their talents further.

This review has highlighted that the current literature is limited by the heterogenicity of definition for gifted students, small sample sizes and lack of comparison groups. Further research should aim to agree on a clear definition of gifted students to improve the validity of the research, better identification methods, larger representative samples, and appropriate controls. An improvement in the quality of research design and reporting seems useful to advance knowledge in the heterogenous field of giftedness to make the greatest contribution to influence policies and practice for gifted students to meet their needs.

Chapter 3 – Main Study Methodology and Methods

3.1 Aim of the research

The research was concerned with explaining the learning experiences of Maltese state schools' Year 10 students, assigned to top-set classes and students in average ability classes. Research was informed by the systematic narrative review (Chapter 2) which provided an evidence-based research approach and guided the interview questions carried out for this research. The aim of this research was to explore the learning experiences of students in top-set classes and in average ability classes. Interviews were carried out with top set and average ability students together with their parent / guardian and identified teachers. In this way, this study also analysed the students' experiences from the perspectives of their teachers and parents / guardians.

3.2 Methodology

3.2.1 The interpretivism paradigms

There are various approaches to study designs, however the most common being the positivist (also known as a deductive, quantitative approach) and an interpretivist (an inductive, qualitative approach).

Historically there has been an emphasis on quantitative methods (Guba & Lincoln, 1994), however the choice between positivist and interpretive paradigms should be based on the assumptions that underpin the study design and data collection. Some researchers point out that positivist approaches are "essential for an objective and rigorous investigation" (Broom & Willis, 2007, p. 19). Nonetheless, researchers that embrace an interpretivist approach highlight the importance of a qualitative understanding of the social interactions of the social actors for their research (Glassner & Moreno, 1989). Broom and Willis (2007, p. 19) cautioned that "[m]ethodologies are not neutral tools" and researchers "need to be able to think critically about the ways in which certain methods produce certain types of knowledge."

The researcher adopted an interpretivist approach (which suited qualitative research methods), aiming to identify, explore, describe, and learn about the opinions, positions,

feelings, principles, and experiences of selected individuals. This entailed that the study design is more flexible and less structured than positivist approaches. In fact, the latter's study design has distinct design and data collection methods, whereas in interpretivist approaches there is an overlap between them. A characteristic feature of interpretivist approaches are measures to ensure faithfulness to respondent which is considered of less importance in positivist approaches (Kumar, 2011). Nonetheless, there is a smaller "power-gap" between the researcher and participants for interpretivist approaches, due to the informal settings set up during data collection (Kumar, 2011, p. 104). The researcher considered an informal setting as important because it puts the interviewees at ease in a context which motivates them further to volunteer information and thereby provide richer accounts of their experiences and related contexts, leading to a detailed understanding of these experiences.

3.2.2 Qualitative, inductive research

This study primarily adopted a qualitative, inductive methodology. Therefore, although the emerging themes were guided by the topics emerging from the narrative literature review, no a priori codes had been prepared by the researcher for her main study and the inductive approach allowed the researcher to apply a bottom-up strategy to analyse the data and create additional codes and themes which emerged from the analysis of the gathered qualitative data. The researcher believes that this approach provided the necessary flexibility and enabled her to gain a thorough insight of the themes derived from the data and in so doing, generate a more comprehensive description of the phenomenon being explored.

The researcher was interested in detailed research on the learning experiences of Year 10 students in Maltese state schools', assigned to top-set classes and students in average ability classes. The researcher selected a qualitative methodology because it provided a possibility to engage with the participants, giving them a voice, understanding their experiences, and enhancing the researcher's knowledge by listening also to other co-actors. The researcher believes that a different methodology would not have provided the same level of access to the participants (Braun & Clarke, 2013) and demonstrate "the multiple dimensions of the complexity of the issue" (Creswell, 1998, p. 15). Moreover, the researcher was interested to

discover the 'how' and 'what' answers, rather than the 'why' questions, typical of quantitative studies (Creswell, 1998).

3.2.3 Paradigmatic approach

The researcher, who aligned herself to the constructivist paradigmatic approach, was interested in detailed research on the learning experience of Maltese top-set students and the average ability classes. As indicated in section 1.7.3, data is generated through structured or unstructured interviews. There was a co-construction of data through discourse and social interactions between the researcher and the participant so that the latter could provide an account of their experiences. The interview data was then transcribed and analysed line-by-line.

3.2.4 Semi structured interviews

deMarrais (2004, p. 55), defined an interview as a "process in which a researcher and participant engage in a conversation focused on questions related to a research study". Brinkman (2018, p. 999) cautioned that interviews have become the standardised methods in qualitative research methods because of their flexibility and discursive forms and became "naturalized" *i.e.* no justification is given in qualitative research as to why interviews are necessary. For reasons already explained in sections 1.7.3, 3.1.3 and further elaborated upon in section 3.1.4.1, interviews were nonetheless the preferred method for the researcher to gather empirical data about the experiences of the students and the perceptions of their parents and teachers.

Britten (1995) classified interviews in three categories:

- structured interviews, where the researcher has a list of pre-set questions which are asked to each participant in the same order and wording and allows limited answers or brief replies. Structured interviews allow limited flexibility; however, they are less time consuming to analyse and therefore can be applied to large samples,
- semi-structured interviews consist of open-ended questions about the topic being investigated, guided by follow-up questions and probes. This will help guide researchers on the issues they are exploring, however semi-structured interviews

remain flexible but are a convenient way of collecting the data. Participants can provide their replies on their perceptions in their own way (Qu & Dumay, 2011); and

- unstructured interviews where the questions' wording, sequence and format are not pre-set or standardised. Additional questions would be included by the researcher depending on the participants' replies.

The semi-structured interview method was adopted for the purpose of this study, since it provided a way of obtaining detailed accounts of the participants' insights and experiences, which is in line with Patton (Patton, 2002, p. 341) explanation of "allow(ing) us to enter into the other person's perspective". The semi-structured, one-to-one interviews allowed the participants to interpret their experiences in their own ways with probing questions used either to clarify or seek to obtain further information from the interviewee (Merriam, 2009). This was the preferred data collection tool because it allowed the researcher and the participant to engage in a discussion with probes used by the researcher into other interesting areas as they emerged, albeit with great caution so as not to lead the interview in any direction. The interview schedule helped to achieve this and supported the participant interaction. The open-ended questions encouraged the participants to discuss at length and discover their thoughts, beliefs in the research topic (DeJonckheere & Vaughn, 2019).

3.2.4.1 Advantages of semi-structured interviews

Open-ended questions within semi structured interviews have several advantages, including the possibility for the interviewees to discuss their experiences deliberately. The researcher can provide a detailed explanation of the purpose of the research, allowing research on sensitive and personal topics to be covered. During the interview, the researcher would adopt a warm and complimentary attitude with the participants because this direct interaction may help interviewees being less biased and more genuine (Oppenheim, 2001). This helps create a rapport between the researcher and the interviewee. Semi-structured interviews have the potential to address major concerns through the use of prompts such that the interview is carried out as an interpersonal discourse and participants may volunteer more information (Qu & Dumay, 2011).

3.2.4.2 Disadvantages of semi-structured interviews

Intense planning before and after the interviews especially on the interview schedule and the interpretation of replies is necessary (Qu & Dumay, 2011). The power imbalance between the interviewee and the researcher always must be considered especially when there is sensitive or personal information being revealed. It may not always be the case that participants are able to engage in a conversation, explain their thoughts and feelings and readily want to share information about sensitive or personal topics (DeJonckheere & Vaughn, 2019). This may lead to questions or words being misunderstood by the participants, especially if there are different meanings attributed to the same word (Willig, 2013). In order to minimise this, Oppenheim (2001) recommended that the interview schedule is piloted to minimise this. A lot of data is generated with semi-structured interviews which necessitates systematic processes to render the data manageable (Cross et al., 2003). Moreover, researchers need to be constantly vigilant on leading questions due to potential bias and their positionality.

3.2.5 Thematic analysis

A qualitative thematic analysis approach was adopted (Narantuya, 2016). Thematic analysis is a systematic way to data analysis by coding and categorising data into themes, applied to analyse and present data themes (patterns). Data is demonstrated in great detail and can deal with diverse topics via interpretations (Boyatzis, 1998). The processed data can be categorised and presented according to similarities and disparities (Miles et al., 2014). Thematic analysis "allows the researcher to determine precisely the relationships between the concepts and compare them with the replicated data" with "the possibility to link the various concepts and opinions of the learners and compare them with data that has been gathered in different situations at different times during the project" (Alhojailan, 2012, p. 40).

3.3 Applying a systematic and transparent approach

Two important aspects concerning quality or rigour in qualitative research are *transparency* and *systematicity* (Meyrick, 2006). There are various approaches for transparency and systematicity during qualitative research as represented by the model in **Figure 2**.

The model enables researchers to judge the rigour / quality of the research by following the following step-by-step process during a qualitative study:

- Epistemological stance – in a qualitative study researchers try to get as close as possible to the interviewees but they also bring their values, biases and beliefs which they have to make known to the reader (Creswell & Poth, 2018);
- Methods used – the researcher sets out a clear research question, aims and objectives on which appropriate methods are selected and the criteria for selection;
- Sampling - the rationale and theory are provided on how the sample of participants was selected but also the process of selection;
- Data collection – appropriate details are provided on how data was collected such that readers can follow the process and be aware of any limitations during data collection;
- Analysis – all necessary details are provided to ensure that data analysis is comprehensive, systematic, transparent, triangulated, and valid; and
- Results and conclusion – the way data informs the conclusions should be clear, providing necessary details on respondent validation and generalisability of results (Meyrick, 2006).

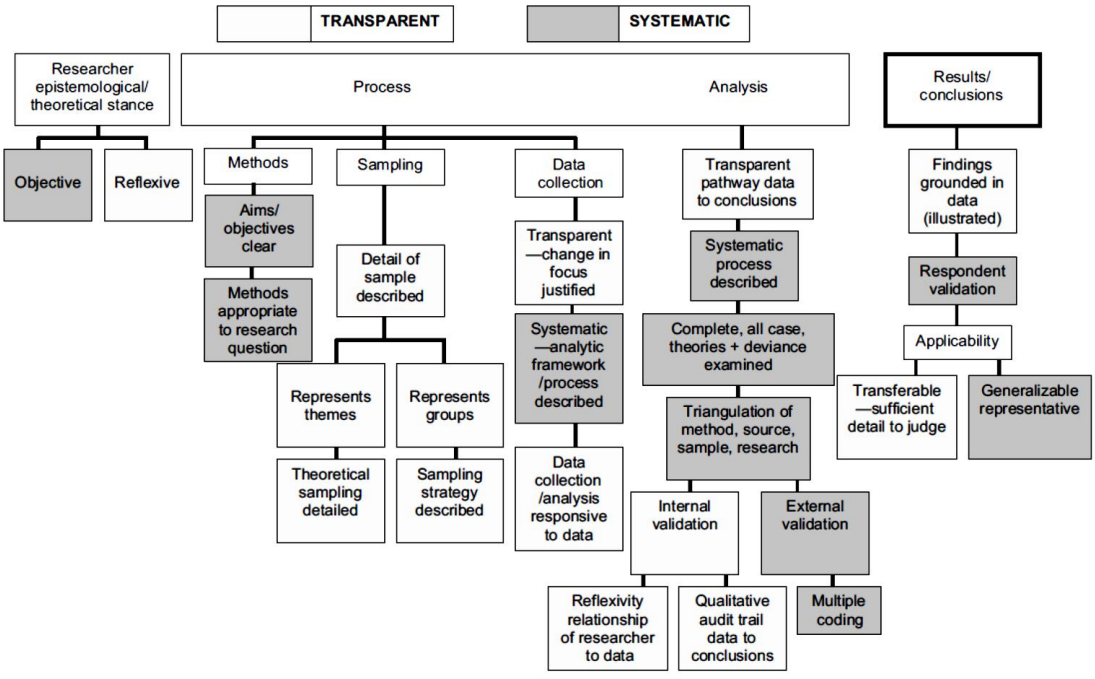

Figure 2 - Quality framework for qualitative research
Source: (Meyrick, 2006).

3.4 Credibility

Guba and Lincoln (1994) submitted that in a qualitative study, trustworthiness is regulated by four indicators – credibility, transferability, dependability and confirmability. The validity and reliability in qualitative research depend on these four indicators. These indicators will be discussed in this section and the other sections below.

According to Guba and Lincoln (1994, p. 114) the *trustworthiness* criteria of credibility (paralleling internal validity), transferability (paralleling external validity), dependability (paralleling reliability) and confirmability (paralleling objectivity) are closely related to the concepts of validity and reliability.

Trochim and Donnelly (2007, p. 149) defined credibility as "establishing that the results of qualitative research are credible or believable from the perspective of the participant in research." Therefore, in qualitative research, when the researcher is interested in the experiences, feelings, beliefs, and perceptions of the participants, it is only the latter who can determine whether the research findings accurately reflect their experiences and feelings. This can be carried out by ensuring that the interpretation of the data reflects that of the participant(s).

To this effect, at the end of each interview, a summary of the notes the researcher had taken were checked with the participants, ensuring that their views and opinions had been recorded accurately and the notes taken were also referred to during data analysis. Interviews were also recorded through Microsoft Teams and transcribed *verbatim*. The data collected was analysed for multiple interpretations by NVIVO which allowed the researcher to adopt "a constant comparative method" (Carcary, 2009, p. 14).

Gaining trust with the participants before data collection was achieved by phoning the parents and teachers following their acceptance to participate in the research. The process was explained, and the information sheets and consent forms were forwarded so that they were fully informative about the research, and they could contact the researcher if they required any clarifications. Before the interviews, the researcher explained the process and queried whether any clarifications were necessary.

Throughout the research, the researcher had regular and frequent meetings with her supervisors' Dr Anna Weighall and Dr Lauren Powell to evaluate processes and procedures used and was assisted through the provision of feedback on decisions made.

3.5 Transferability

Transferability "refers to the degree to which the rest of qualitative research can be generalised or transferred to other contexts or settings" (Trochim & Donnelly, 2007, p. 149). As explained in this section, external validity in qualitative research has always raised several queries. Schofield (1996) submitted that qualitative research can be generalised provided that clear, detailed and in-depth explanations are provided so that other researchers can determine to what extent the research can be generalised to other research situations. Lincoln and Guba (1985, p. 316) had previously cautioned about this and advised researchers to provide a "thick description", so that other researchers can ascertain whether transferability was possible.

Although one limitation of this research was the small number of cases, there were similarities in patterns within each category of participants interviewed (gifted students, average students, parents, and teachers), for instance their ages, same school, similar school culture, similar social circumstances, small families).

Transferability depends on the approach adopted in qualitative research. For instance, interviews may be "…difficult to replicate, since the data collection device is a human being, and the technique is also highly vulnerable to interviewer bias" (Guba & Lincoln, 1981, p. 187). Then, although the researcher can influence the participant through cues (both consciously and unconsciously), interviewers can become aware of these cues and modify them. The interview schedule adopted in this research is included in **Appendix 4**, and which also includes an explanation of the scope of each question. Semi-structured interviews with prompts were used with all participants as necessary, to either elicit required information, or realign the interview session when the interviewee deviated from the question asked.

3.6 Dependability and confirmability

Lincoln and Guba (1994) paralleled dependability and confirmability to reliability and objectivity respectively. Dependability "is concerned with whether we would obtain the same results if we could observe the same thing twice" (Trochim & Donnelly, 2007, p. 149). Kumar (2011) advised that in qualitative research, a detailed and in-depth record of the process is normally taken so that other researchers can replicate to determine the level of dependability. For this study, field notes were kept during the interviews and details of how processes were carried out are provided in the respective chapters.

Confirmability "refers to the degree to which results can be confirmed or corroborated by others" (Trochim & Donnelly, 2007, p. 149). In qualitative research, confirmability is only achievable if both researchers follow identical procedures for results to be compared.

3.7 Summary

There are ongoing debates on the validity and reliability of qualitative research (Kumar, 2011). Even due to the limited knowledge on the learning experiences of gifted and average students especially in Malta, it was compelling to hear their voices and the perceptions of their parents and teachers. This necessitated appropriate research methods for data collection and the application of an appropriate methodological framework. The preceding sections of this chapter have drawn on the underpinning philosophy, the selected methodology, research design and methods used for this research, and how trustworthiness was fostered throughout the research process.

3.8 Methods

3.8.1 The researcher's positionality

Every researcher's epistemological and ontological orientations influence the research project's process, including the methodologies (Kivunja & Kuyini, 2017). Bias is diminished by the researcher stating the positionality (Milner IV, 2007) and identifying his / her position to the self, the participants and the research settings and procedures (Savin-Baden & Howell Major, 2013).

Being an educator for 20 years and involved in the management of inclusive practices in State schools for the past seven years, the researcher appreciates the importance of the needs of every individual student. Whilst it is understood that gifted students also have individual needs, the researcher had information, neither on their educational experiences, nor on how this experience was perceived by their parents and teachers. The researcher wanted a better understanding of the social and educational experiences of gifted children in the upper tracks of the Maltese educational system. During her school visits and observations in various classes, including top-set and average ability classes, she has personally experienced gifted students who were not always being challenged in classes, becoming bored and frustrated and resorting to challenging behaviours or becoming passive, without participating in the classroom. The researcher was interested in the learning experiences of gifted students in mainstream schools. This necessitated that she remains vigilant during the study. Whilst being conversant with the system can be beneficial because the researcher had thorough knowledge of student–parent-teacher interrelationships, this may have introduced a degree of confirmation bias in her study. To mitigate this, the interviewees were advised that the interview sessions were interviewee-centred and therefore, they were free to express themselves, explaining further that they were the knowledgeable ones – the ones who had the information. During the interview sessions, the researcher emphasised more on her listening, with minimal interventions to ensure that she remained as neutral as possible.

In view of the researcher's current position of Director - National School Support Services, which is a senior managerial position within the Maltese Ministry for Education, Sports, Youth, Research, and Innovation (MEYR), it was appreciated that this may influence the participants' replies to her questions. To this effect, none of the participants were informed of the researcher's job. One of the participants, however, recognized the researcher. The latter emphasised her researching role, rather than her day-to-day job. In so doing, the researcher wanted to avoid a situation where rather than receiving information which reflected their experiences, the participant may have provided answers which would have pleased the researcher, had she worn the hat of a senior manager.

3.8.2 Ethical approval

Ethical approval number 037645 was granted for the study 'Exploring the Learning Experiences of Year 10 Students in Maltese State Schools attending Top-set Classes and

Comparing them to Average Ability Classes' by The University of Sheffield's School of Education Ethics Committee on 18th March 2021 (**Appendix 5**), following clarifications requested in February 2021. In addition, permission to conduct the research study in Maltese State schools was also provided by the Maltese Ministry for Education, Directorate for Research, Lifelong Learning and Employability on 19th May (Reference number: R05-2021 806) (**Appendix 6**).

3.8.3 Identification of participants

For this study, it was decided to limit the participants to three gifted students and three average ability students who had just finished Year 10 (average age 14 years) and were attending a local State school. Students were selected as finishing Year 10 so that they would have nearly completed their educational journey and would be able to provide an insight on their experiences at school. Most of the secondary schools in Malta are separate from the middle school and have their own school leadership team. For the purpose of this study, this school was selected since it was one of the few state schools on the island with no middle school *i.e.,* years 7 and 8 are part of the secondary school. This researcher considered this as important because the identification of the students was carried out by the school and therefore, the school administration had to know the students very well. Had this research been carried out in a secondary school fed from a middle school, the school administration would only have known the students for two scholastic years (although it must be highlighted that the imposed Covid-19 restrictions have compromised the effectiveness of the school educators-students relationship). Therefore, this school knew these students who were now in Year 10 for the past four scholastic years and were in an ideal position to help the researcher in identifying the participating students.

Since at the time of data collection there was (and still is) no national identification procedure for gifted students, the students were identified by the school administration, based on their academic grades, following instructions provided by the researcher. The gifted students were identified as the three top students who achieved the highest grades in the four core subjects (Maths, Maltese, English, and Physics) and other subjects, and were the top students in Track three. The average ability students were identified as those who obtained average grades in the four core subjects and other subjects and were on the lowest spectrum of Track three.

Therefore, the selected participants although both were in Track 3, were on opposing ends of the spectrum. This provided the ideal backdrop to explore the learning experiences of these two groups of students and be able to cross compare.

The inclusion criteria are summarised below:

- just completed Year 10 at the selected state school;
- no gender discrimination;
- the selected gifted students are the three top students with the highest grades in the four core subjects and other subjects; and
- the selected average students obtained average grades in the four core subjects and other subjects and were on the lowest spectrum of track three.

The students were identified in July 2021, just after the annual examination results had been issued. Their identification could not take place before since students in Malta had not sat for examinations during scholastic year 2019 – 2020 due to Covid-19 restrictions. Once the six students (three gifted and three average students) were identified, the Head of School contacted the parents to inform them of the study and seek confirmation on whether they and their children were interested to participate. All parents bar one, eventually confirmed their interests to the Head of School. As for the selected parent who expressed no interest, another student / parent was identified and selected.

The researcher was also interested in the perceptions of the students' parents on their son / daughter's learning experiences. She contacted the parents who were provided with two information letters (one for themselves and one for their children. The letters explained the scope of the research, provided the participants with the adequate information concerning the study (**Appendix 7**). The researcher also clarified any queries raised, ensuring that they have been understood. She also obtained their (voluntary) agreement to participate. Three consent forms for their participation and those for their children were also sent (**Appendix 8**). The information sheets and consent forms were sent via email. The consenting candidates were requested to confirm their interest by signing the consent forms, and online interviews through Microsoft Teams was set at the participants' convenience. Microsoft Teams was

selected for interviews because it is the platform approved by the Maltese Ministry for Education and teachers, students and their parents had access to it.

3.8.4 Procedures for the selection of the teacher participants

The researcher was also interested in the perceptions of the students' teachers on the learning experiences of these two groups of students. During the interview, the identified students (gifted and average students) were asked to select three teachers who, in their opinion, were contributing to their learning experiences. The selection of three teachers ensured the necessary redundancy, given that there were students who identified the same teacher. There were four teachers who were selected by more than one student. These teachers were contacted in October 2021, and an information letter and consent form were provided (**Appendices 7** and **8**). All four gave their consent for their participation in online interviews through Microsoft Teams.

3.8.5 Overview of the participants

16 participants were interviewed. The three gifted students had similar characteristics but came from different backgrounds and had their own personal preferences. **Table 5** provides a summary of the main characteristics of the gifted students. Pseudonyms were used to protect their identities.

Name	*Gender*	*Age*	*Level of study*	*Preferred learning strategy*	*Challenges encountered in class*	*Coping mechanisms*	*Option subjects chosen*	*Hobbies*	*Future aspirations*
Jolene	F	14	Year 10	Visual methods, reading notes several times.	Difficulty in topic, talkative and disruptive students.	Second explanation from the teacher, extra work, online research, You tube videos and Teleskola.	Chemistry and Biology (studies history privately).	Field hockey, playing the electric guitar, needlework and crafts, reading, watching television, attending girl guides.	Vet
Kayleigh	F	14	Year 10	Visual methods, reading notes several times, working past papers and extra work.	Difficulty in topic.	Second explanation from the teacher or peers, extra work, looking up notes, online research.	Chemistry and Biology.	Playing the piano and the guitar and physical workouts.	Working in a hospital setting in the laboratory or an autopsy doctor.
Lina	F	14	Year 10	Working past papers and extra work, reverse classroom, clear and concise class explanation, use of concrete examples and humour in class.	Difficulty in topic, teacher dictates lessons at a fast pace.	Extra work, revision of topic and study schedule.	Chemistry and Biology.	Reading and watching television series.	Doctor.

Table 5 - Main characteristics of gifted participants

There were three average students who participated in this study who had diverse hobbies, subject option choices and preferred learning strategies as shown in **Table 6**. Pseudonyms were used to protect their identities.

Name	*Gender*	*Age*	*Level of study*	*Preferred learning strategy*	*Challenges encountered*	*Coping mechanisms*	*Option subjects chosen*	*Hobbies*	*Future aspirations*
James	M	14	Year 10	Appropriate questioning techniques, class discussions, teacher reads, explains and dictates notes.	PowerPoint with no explanation.	Ask the teacher or private lessons teacher for a second explanation.	Accounts and social studies.	Hockey, kickboxing and basketball.	Opening own business, or working in the Civil Protection Department or the Police Academy.
Luciano	M	14	Year 10	Teacher reads, explains and dictates notes, visual methods and games.	Lesson with no activities.	Internet research but would then ask the teacher for a second explanation.	Computing and Information technology (IT).	Skateboarding	Work in the IT sector or gaming.
Maria	F	14	Year 10	Step by step explanation by the teacher.	Teacher reading out notes.	Revise teacher's notes and ask teacher for a second explanation.	Hairdressing and beauty, fashion and textiles.	Going out with friends and drawing.	Working the fashion industry, hairdressing and make-up.

Table 6 – Main characteristics of average students

The mothers of the student participants (n=6) were interviewed. Demographic details are tabulated in **Tables 7** and **8**.

Parent	*Age bracket*	*Occupation*	*Number of children*	*Birth order of daughter*
Jolene's mother	40-50	Production line in a local manufacturing company.	2	eldest
Kayleigh's mother	40-50	Senior assistant librarian.	1	only child
Lina's mother	Above 50	Assistant principal.	2	youngest

Table 7 – Demographic details of mothers of gifted students

Parent	*Age bracket*	*Occupation*	*Number of children*	*Birth order of daughter / son*
James's mother	40-50	Learning support educator (LSE).	1	only child
Luciano's mother	40-50	Housewife.	3	youngest
Maria's mother	40-50	Small business owner.	3	youngest

Table 8 – Demographic details of mothers of average students

During the interview, all student participants were asked to identify three teachers who they felt used the appropriate teaching strategies for them to learn. Four teachers, who had been mentioned by more than one student were identified. Their demographic details are tabulated in **Table 9**. Pseudonyms were used to protect their identities.

Teacher's name	*Male/ female*	*Age bracket*	*Years of teaching*
Amber	Female	40-50	9
Antonella	Female	30-40	12
Loredana	Female	40-50	25
Victor	Male	40-50	more than 25 years

Table 9 – Demographic details of teacher participants

3.8.6 Data collection instrument

Data was collected through individual, semi-structured, interviews, which were designed on the topics generated during the analysis stage of the narrative literature review (*Social relations with peers, Teacher – student relations, Teaching and learning experiences, Family relations* and *Leisure activities)*. As stated in section 2.5, the narrative literature review identified several knowledge gaps in the learning experiences of gifted students that had to be addressed. These included career choices and types of leisure activities that gifted students have, as compared to non gifted peers. These aspects were also included in the interview schedule.

The interview questions were similar for each category of participants so that comparisons of responses could be facilitated, with minor modifications to make them suitable to the respondent (**Appendix 9**). The interview schedule was subdivided according to these topics, for each category of participants (students, parents, and teachers) with a total of 12 open-ended questions each with a specific scope (**Table 10** and **Appendix 4**). The interview schedule was divided into the following seven sections:

i. general school experiences – the introductory part was to break the ice, to introduce the purpose of interview and obtain an overview of their experiences on the track system;

ii. student's preferred ways of learning – to obtain an overview of the teacher-student relations and their teaching and learning experiences, including their motivations to learn;

iii. social relationships – to obtain an insight on relationships with peers at school and in the class;

iv. family relationships – to obtain an understanding of relations with parents; their pressures and expectations and parental support;

v. personal characteristics – to identify their hobbies, leisure, and time management;

vi. future aspirations – to obtain an insight of their choice of subjects at school, future career aspirations and use of any support services; and

vii. concluding questions – to elicit overview of general school experience and any concluding comments participant may wish to add.

Demographic details of the participating parents and teachers were also collected to gain an insight of the gender, age bracket, occupation, number of siblings, and birth order of the child participant. As for the participating teachers, details on the gender, age bracket and years of teaching were also collected.

Section	Number of questions
General school experiences	2
Student's preferred ways of learning	4
Social relationships	1
Family relationships	1
Personal characteristics	1
Future aspirations	2
Concluding questions	1

Table 10 - Sections of the interview schedule and the related number of questions

The interview schedule was pilot tested with one student. The content and flow were regarded as appropriate, and it was estimated that the interview would last about 40 minutes. In view of the Covid-19 restrictions in force at the time, interviews with selected gifted students, average ability students, their teachers and their parents were carried out online. Prompts and probes were used throughout the interview sessions, either when the interviewees deviated from the topic, or when new topics were presented. All the questions were asked to the interviewees. Each interview lasted between 30 minutes and 80 minutes. The leeway afforded by open-ended questions and ensuing discussions, provided the necessary freedom to the interviewees to communicate their views and elicit the knowledge, which the researcher was interested in.

Interviews took place at a time and venue convenient for the participants and were audio-recorded on the digital platform because all the participants consented to this. At the start of the interview, the participants were asked whether there were any queries from the Information Sheet that they wanted to clarify. They were also asked whether they wanted to carry out the interview in Maltese or English and they all requested to participate in Maltese. At the start of the interview, the researcher tried to break the ice with the participants, create an atmosphere of trust, and help build a rapport with them. Towards the end of the interview, a summary of the notes the researcher had taken were checked with the participants to ensure that their views and opinions had been reflected accurately. Once the interviews were audio-recorded, they were kept in a password-locked computer, which was only accessible to the researcher.

Interviews were then transcribed in Maltese on Microsoft Word and were also stored in a password-locked computer.

3.8.7 Processing the translations

All the information letters and consent forms were prepared in Maltese and English by the researcher to suit the participants' preferences and ensure their respective choices are respected. At the start of the interview, all participants were asked to indicate their preferred language for the interviews. All requested to participate in Maltese.

The transcription of the interviews was carried out on Microsoft Word. Both the transcribing and the open-coding analysis of the data was done in Maltese. Initial codes, memos, categories, and cluster names were done in English since this was the preferred working language of the researcher. For the selection of the best quotation during the writing of Chapter 4, NVivo provided the researcher with a list of highlighted excerpts under that particular theme, and which were still in Maltese. However, at the point when the researcher selected most appropriate excerpt/s, the text segment was translated from Maltese to English by the researcher herself. The researcher was very cautious to remain faithful to the meaning that the participants wanted to convey. Overall, there were no issues, and whenever there was doubt, the researcher resorted to the support of a certified translator of the Maltese language.

3.8.8 Implications of online data collection

As already explained, due to the Covid-19 restrictions, interviews with the students, parents and their teachers had to be carried out online. The researcher would have preferred that these were carried out face-to-face; working towards an atmosphere of trust and building a rapport would have been easier and more effective when face-to-face, rather than behind a screen. For instance, one of the participating parent and her daughter switched off the camera for the entire duration of the interview. Although the researcher did not feel that this had compromised the extent of volunteered information, it made it more difficult for the researcher to build a rapport.

The researcher encouraged the interviewees not to remain in the same room during the duration of the interview. However, all parents and the respective students opted to

accompany each other during their online interviews. The influence which this had on the interviewees could not be excluded and quantified. Nonetheless, the researcher did not identify any hesitations in the replies to the questions made; occasionally, parent and student did not hesitate to contradict each other. Nonetheless, given the choice, the researcher would have preferred that students and teachers were interviewed at school whilst parents were interviewed at their convenience either at home, or at any other preferred location.

Several advantages and disadvantages are associated with online interviews. For instance, online interviews allow for easy access from any location, without the need to travel. Interviewees can take their time to think, reflect and edit their response if necessary (*e.g*., requesting the deletion of part of their reply from the recording). Then, interviews can be carried out at the participant/researcher's convenience, and it is quick and easy to use. Both the participant and the researcher can participate in real-time conversation, and therefore the researcher can address any ambiguities, clarifications or questions even through the effective use of prompts (Greenhill & Griffiths, 2014). Some participants may find it easier to disclose certain issues during online interviews (Madge et al., 2006)

The disadvantages of online interviews include technical difficulties that may interrupt the interview. The participants also require a degree of technical level to participate and can easily become distracted if the interview becomes lengthy. Moreover, body language and nonverbal cues are not necessarily detected, and the researcher may not be able to recognise that interviewees are being stressed by the interview (Manikam et al., 2020). There may also be some issues with identity verification (Madge et al., 2006).

Despite these disadvantages, the researcher feels that the online interviews allowed in-depth data collection and a rapport was built between the interviewees and the researcher.

3.8.9 Data analysis

3.8.9.1 Thematic analysis of data using CAQDAS

Large amounts of data are associated with qualitative research that necessitated systematic and rigorous analysis which was very time consuming (Alhojailan, 2012). To support data analysis, Computer Assisted Qualitative Data Analysis Software (CAQDAS) was used which, although it did not analyse the data *per se*, it assisted the researcher during the data analysis

(Zamawe, 2015), especially when it came to storage, coding and retrieval of data (Denscombe, 2010). The researcher selected to work with NVivo software to analyse the large amounts of interview data gathered. This choice was based on several advantages including its high compatibility to various research designs and data analysis including thematic analysis, supports effective and efficient coding and it is easy to use (Zamawe, 2015).

As with all types of CAQDAS software, although NVivo was found to be very useful to the researcher, it has limitations. The use of the software will neither absolve the research from the responsibilities of ensuring that the data is not devoid of context and meaning, nor will it mitigate the risk of researcher's influences, as a result of potential biases and beliefs (Ishak & Abu Yazid, 2012).

3.8.9.2 Adopting the model for the thematic analysis of data using CAQDAS

The model for thematic analysis recommended by Braun and Clarke (2006, p. 87) was adopted. The data analysis model encompasses the following six phases:

Phase 1: Familiarising yourself with the data

The interviews were transcribed on Microsoft word. The transcripts for each of the participants in word format, were imported to NVivo and read very carefully several times and initial ideas taken note of.

Phase 2: Generating initial codes

Initially, two transcripts from the participants were read carefully by the researcher to elicit codes, ensuring that they were aligned with the research questions. Open coding, *i.e.*, "the process of breaking down, examining, conceptualising and categorising data" (Corbin & Strauss, 1990, p. 61) was used to assign highlighted excerpts of text to relevant codes. This inductive approach follows a set of procedures to create meaning to raw but complex data, through the development of codes and eventually themes or clusters (Thomas, 2003). The rest of the data was grouped under the relevant codes but remained flexible for the creation of other codes and modification of existing ones. **Figures 3, 4** and **5** provide a snapshot of the data analysis using NVivo.

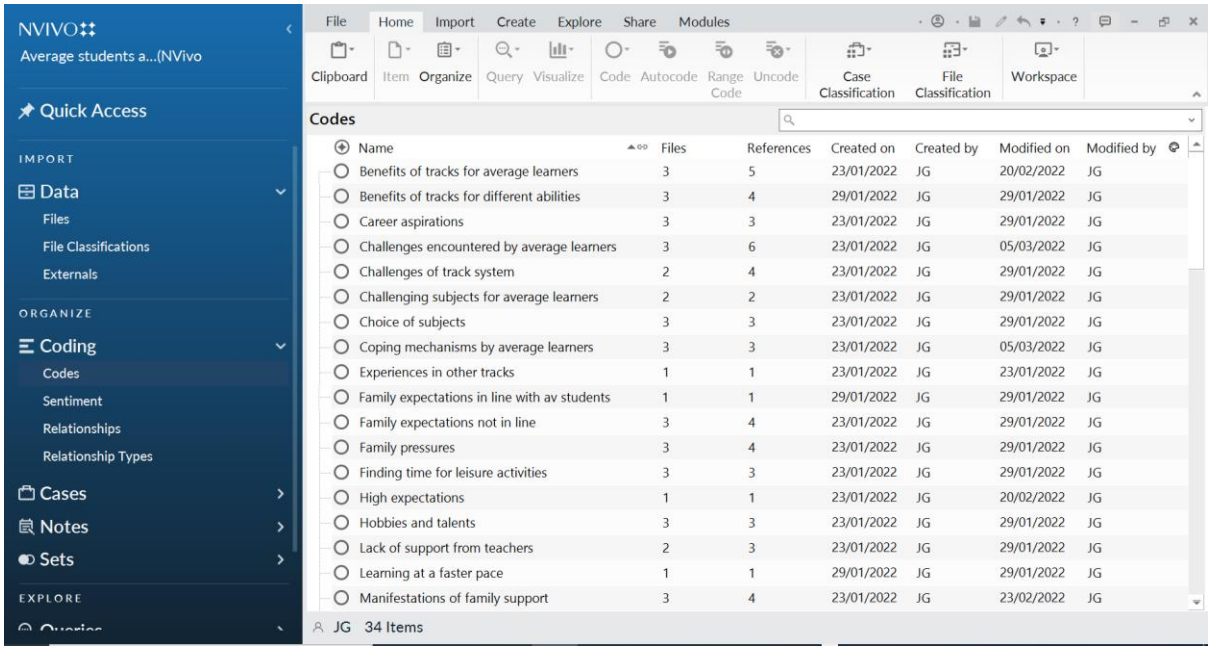

Figure 3 – List of codes showing references

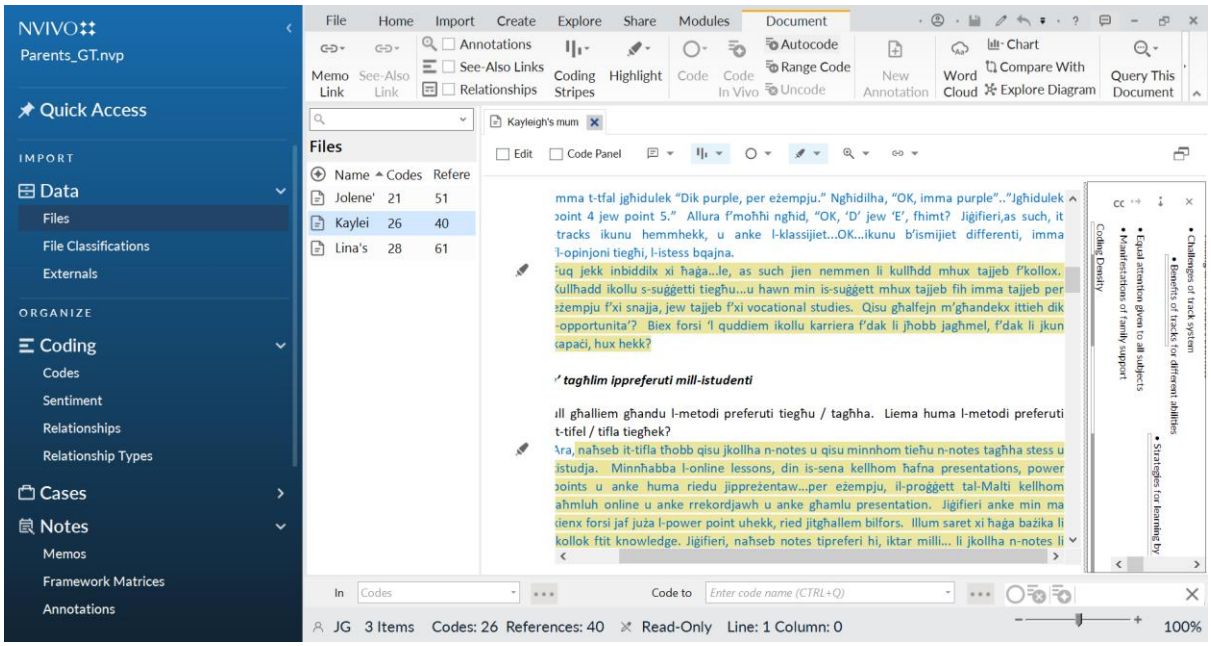

Figure 4 – Coding of transcript of one of the participants

Codes were continuously being reviewed by the researcher. The researcher selected parts of the data to be coded, named codes and identified evolving patterns, keeping in mind the research context (Miles et al., 2014). Memos were also created to capture the researcher's thoughts, reactions, potential relations and even doubts, and to keep track of the analytical process – a function, well supported by NVivo.

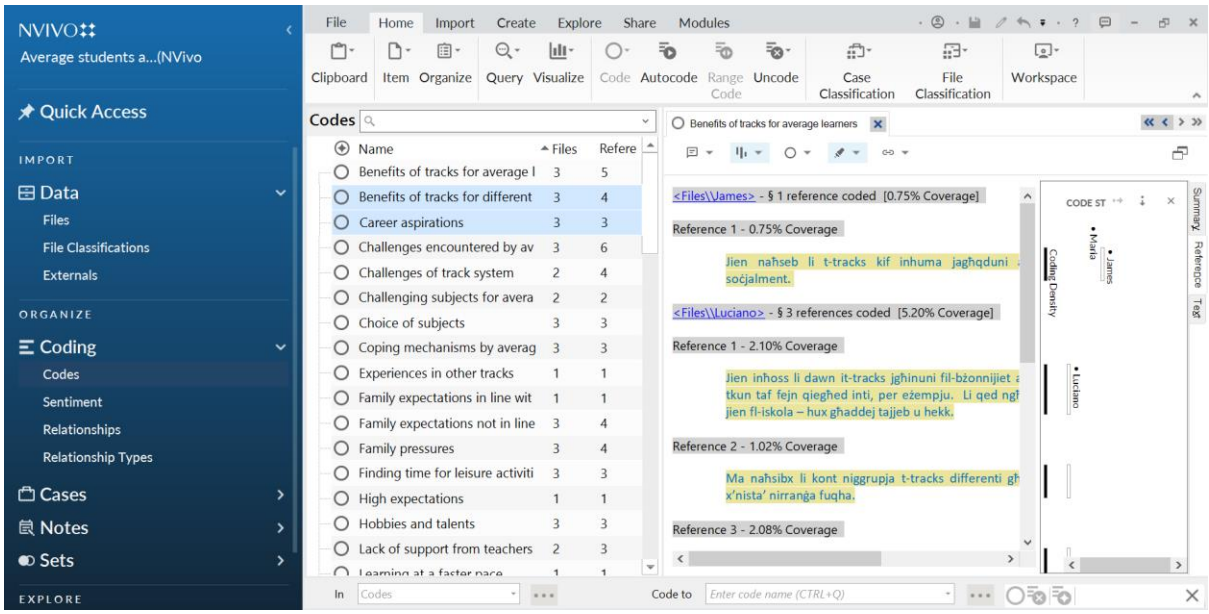

Figure 5 – Demonstration of selected codes

Phase 3: Searching for themes

Once coded on NVivo, the data was read and re-read to cluster into broader categories or themes so that they could be managed more effectively. NVivo made it very easy to rename and reorganise clusters, because this can be done at the click of a button. NVivo has the facility of codebooks, which were issued for each category of participants (see **Appendix 10** for a complete list of codebooks for each category of participants) and which supported the researcher in the clustering of the broader categories. NVivo provided the number of sources referred to in each cluster (References in the Codebook). **Table 11** demonstrates the initial number of clusters for each category of participants.

Category of participants	Initial number of clusters
Gifted students	39
Average students	30
Parents of gifted students	30
Parents of average students	29
Teachers	35

Table 11 – Demonstrates the initial number of clusters for each category of participants

Phase 4: Reviewing themes

For this study, codes were grouped into four themes and three subthemes. This was in line with Thomas (2003) advice that most inductive studies create between three and eight main categories in the findings. It was imperative that codes within the themes were consistent and related to the particular theme or sub-theme (Braun & Clarke, 2006). The themes selected by the researcher served as a summary indicators to the raw data (Namey et al., 2008) and "describe[d] the bulk of the data (Joffe & Yardley, 2004, p. 67). A thematic map was set up (Chapter 4, **Figure 6**), which provides additional, detailed comprehension of the data (Alhojailan, 2012).

In accordance with Braun and Clarke (2006) guidelines, manual checks were also carried out by the researcher during the data analysis by selecting an excerpt at random and recoding it blindly to ensure accuracy of the coding. In case of concern / verification, the researcher repeated the coding process. Being familiar with the transcribed documents, the re-checking process was not time consuming.

Phase 5: Defining and naming themes

To ensure consistency in the assignment of codes, each theme was also defined (**Table 12**).

Phase 6: producing the report

Following the analysis of the interview transcripts, a comprehensive and coherent report was compiled (Chapter 4). The data emerging themes (four) and sub themes (three) were presented and supporting quotations were provided "to capture the essence of the point" (2006, p. 93).

3.9 Ethical considerations

The researcher constantly strove to meet the highest ethical standards and responsibilities to ensure quality and integrity.

During the pre-data collection, three information letters were prepared (students, parents, and teachers) that provided enough information on the research so that an informed decision could be carried out by the participants. An age-appropriate information letter for the

students' participants was also prepared so that it could be understood easily. Information letters for the parents and students were prepared in Maltese and English to ensure the participants' choice is respected. All information letters included the nature and purpose of the research study. Jargon-free language was used to explain participants' importance for the study, duration of data collection, use of the collected data, and how it was intended to be represented.

All information letters clearly stated that the participants were free to choose whether they wanted to participate or not and would be given information on how they could withdraw from the study at any time. The researcher's contact details (email address and mobile number) were also provided, should the participants require any clarifications. Consent from the students was also requested irrespective of their parents' consent to ensure that they were happy to participate. Information letters and consent forms were sent either by email or post (the latter including the researcher's self-addressed envelope), according to the preferences of the participants. At no point during the recruitment and interview process were the interviewees referred to as gifted or average to avoid language which may be less sensitive towards one section of the participants.

During data collection *i.e.*, prior to each interview session, the scope of the research was explained again by the researcher, using jargon-free language. The participants' rights were explained, *i.e*., that they were free to withdraw from the study at any time and their right not to answer any question during the data collection was also emphasised. The semi-structured interviews were set up as non-discriminatory open-ended questions, keeping in mind the ethical respect for participants. The researcher's contact details were again provided at the end of the interview sessions so that any clarifications, corrections, or requests for withholding data could be communicated. At the end of each interview, a summary of the notes, which the researcher had taken, were checked with the participants thereby ensuring that their views and opinions had been taken accurately. These notes were also referred to during data analysis.

At the end of the interview sessions, the interviewees were also invited to either clarify, make any corrections, or hold back parts of the data as deemed necessary. The processing of data was also explained, including the explanation of pseudonyms to ensure confidentiality and anonymity. Other considerations prior to conducting the interviews were taken into

consideration by the researcher, including the time, date, and venue convenient to the participants were agreed. Interviewees were asked for their permission to be recorded, although they were free to reject, 'talk off the record' or even discontinue the interview.

During the post-data collection, the transcribed data and coding of data was only carried out by the researcher on a password-protected personal computer, whose access was under full control of the researcher. Once all data was collected and transcribed, it was interpreted and presented in a meticulous manner, keeping in mind loyalty and respect to the participants who shared their experiences. The recorded information and data analysis will remain confidential and will be disposed in accordance with the University guidelines, following completion of the research study. Access to data was only shared with the researcher's supervisors. Data was only used by the researcher and not provided / shared with third parties.

3.10 Conclusion

This chapter has described the research methodology developed for this study including the ethical considerations involved, data gathering and its analysis using NVivo.

Chapter 4 – Results

4.1 Introduction

The data was obtained through online in-depth semi-structured, open-ended interviews with 16 participants with interview prompts used as guidelines.

4.2 Overview of the main themes

Inductive analysis of the interview data from the gifted and average students, their parents and teachers led to the identification of four themes and three sub themes, as illustrated in **Figure 6** and defined in **Table 12**.

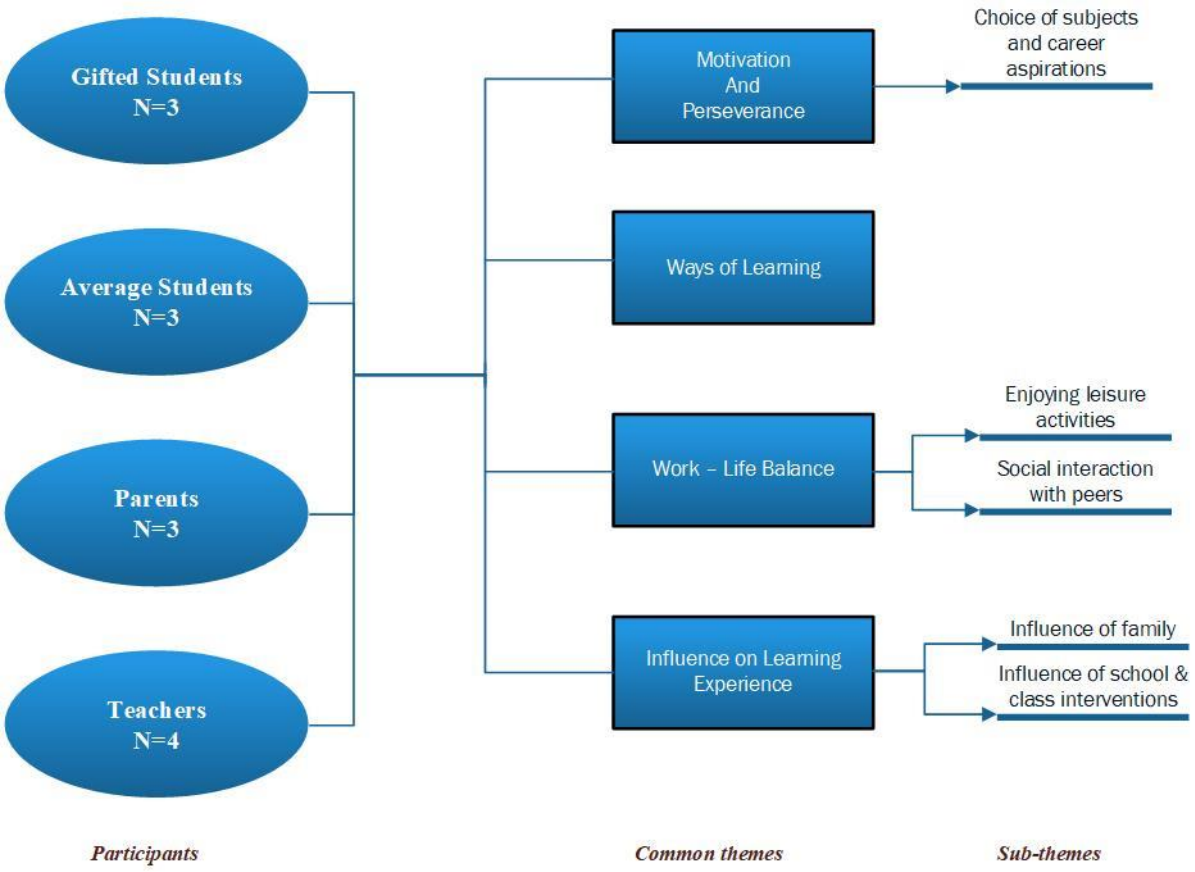

Figure 6 – Themes that emerged from the data

These themes are presented in **Table 12**, with supporting quotations. Different quotations were used with the aim to provide evidence, support and validate interpretations (Miles et

al., 2014). They cover the experiences of gifted and average students, their parents and teachers. The similarities from the data of different participants' views were combined and discussed under the same theme; therefore, although similar, the views were not identical, and this was reflected in the coding of the data. For instance, motivation and perseverance were stronger in gifted students and this was this was also reflected by their parents and teachers. Similarly, gifted students had pre-set high career aspirations, whereas average students were uncertain on prospective career aspirations.

Themes	***Definition***
Motivation and perseverance	Captures motivation and determination to study without being prompted, as experienced by the students, and perceived by their parents and teachers.
Ways of learning	Encapsulates the strategies adopted for learning within the track system.
Work life balance	Captures the ideal arrangement set by the individual participants of leisure and social life without having a negative influence on academic work.
Influence on learning experiences	Identifies the functions of parents and teachers in the academic journey of students.

Table 12 – Definition of the main themes

4.2.1 Theme 1

1.0 Motivation and perseverance

Gifted students

This code emerged strongly from the responses of the gifted students (referenced 22 times across three participants). Several interview questions were aimed to elicit information on the students' motivation and perseverance. The researcher's interest was motivation in learning and for keeping up with extra-curricular activities. Without exception, all students were highly motivated to learn, demonstrated through the various ways they used to learn, even if the topic was perceived to be challenging for them, not giving up and their organised ways to prepare for exams and other extra-curricular activities.

All three students remarked that they enjoyed learning:

"I always loved school." [Jolene]

"School always provided good experiences." [Kayleigh]

"…as from primary school I was always focused…an exemplary student". [Lina]

Without exception, all three students were motivated to learn. This was mainly evident on their perseverance when they perceived difficulties in a topic or subject:

"If I find a challenging topic, I ask the teacher to explain it again to me …I ask my friends and give an internet search. You always find things on You tube. This year we also had Teleskola." [Jolene]

"I work a lot of past papers and additional work…if there is something difficult for homework or additional exercises I try to look it up on my notes." [Kayleigh]

"If I haven't understood a topic well, I revise it and if I still think I have problems I will do extra work to put the topic into practice." [Lina]

Other manifestations of motivation were also expressed during the interview sessions which included dilemma in the choice of subjects (because all subjects were deemed to be interesting) (Jolene), challenging subjects were seen as an opportunity of self-confidence (Lina) and which provided a sense of achievement that encouraged deeper studies and research (Kayleigh). All three participants referred to the significant study time, which they need to dedicate to maintain their level.

Lina also referred to utilising activities organised during recess time for further learning:

"There are break activities that I learn a lot from such as the history club, SUP (Stop Using Plastic), YRE (Young Reporters for the Environment) that made me more aware of the environment and at the same time covers a number of subjects learnt at school." [Lina]

Results indicated that motivation was also accompanied by organisational skills with respect to time management. This will be further discussed in section 4.3.3:

"My notes help me to be organised, especially now that I will soon have my SEC examinations, and these help me to understand more." [Kayleigh]

"When exams start approaching, teachers start to understand me a lot because I do not study the notes, but I do a lot of extra work...in fact to study I have compiled a timetable to

have a balance between all subjects and I will not give priority to certain subjects, but I have time for all subjects." [Lina]

All three participants agreed that all subjects were given equal attention, however during the respective interviews, Jolene and Lina also commented that more focus was given to their option subjects Biology and Chemistry together with Maths, Maltese, and English, being the core subjects. They commented that the other subjects such as Religion and Social Studies were still studied, since they will still be sitting for their SEC examinations. Jolene also studied an additional subject (History) privately because she was interested in the subject.

The participants were asked to provide information on their role models, if any. No reference was made to mentors because there are no mentors in Maltese schools. There was unanimity between the participants that they had no role models that perhaps influenced their motivation. One of the participants commented that her determination drives her forward:

"I do not have a role model. I do not think that I should focus on a role model; rather it is my determination which helps me." [Lina]

Several challenges encountered by the three participants were described. Without exception, all three participants highlighted that it was not uncommon that they experience a topic that they did not understand. The perseverance these students demonstrated in such situations has already been discussed in this section. Other challenges encountered included talkative and disruptive students [Jolene] or when the teacher dictated the lesson at a fast pace and students had to write down notes without understanding [Lina]. These challenges triggered coping mechanisms. Two of the participants explained how they either look forward to extra work, or utilise the time in a productive manner, when they finish their work before their peers in class:

"Whilst the teacher is explaining to the students who haven't understood, we would be given extra work to carry out." [Jolene]

"I grasp Maths very quickly; therefore, since I already knew what the teacher was explaining I used to compile my own notes. When I finish, I used to continue following the lesson." [Lina]

All three participants felt that the expectations of their parents and teachers were in line with theirs:

"…the expectations are that you do well…but that is with everybody…in that even I myself have this expectation." [Kayleigh]

"I am that type of person that if I get less than 75% I say…but couldn't I have done better?...my expectations are in line with those of my teachers." [Lina]

Although all participants paid tribute to the support received from their families and felt no pressure from them, two of the participants (Jolene and Kayleigh) did not feel pressured by their teachers', however Lina experienced this differently:

"…many teachers in our class pressure you and give many hard questions." [Lina]

In summary, gifted students enjoyed learning and were motivated to learn. This was evident by their perseverance when they experienced difficulties in a topic or subject. Other manifestations of motivation emerged from their dilemma in their choice of subjects, their organisational skills, and giving full attention to all subjects. They felt well supported by their parents and felt no pressure from their parents and teachers, bar one participant, but all have considered expectations to be in line with theirs.

Average students

The same interview questions were asked to the three average students to elicit information on their motivation and perseverance, however the code motivation emerged much weaker than those for gifted students (three references). This lower level of motivation was demonstrated even when they found challenging topics, challenges in their learning, and their ways of coping with these challenges.

Although all three average students indicated that they tried to do their best at school and referred to additional efforts at home when starting a new topic, they mostly relied on a second explanation from the teacher:

"If there is a new topic that I cannot understand, I try to go through it at home so that I will not stop the lesson. If I still do not understand, then I will ask the teacher or my private lessons teacher." [James]

"When we start a new topic, I may check on YouTube or see a video…if I still cannot understand, then when I go to school, I will ask the teacher to help me understand." [Luciano]

"Usually, when we start a new topic, I revise it when I go home so that when we build on it, I would be able to understand. If there is something that I cannot understand, I will ask the teacher." [Maria]

The participants referred to the challenges encountered at school. Without exception, they referred to the teaching strategies in class, which mainly related to teachers or students themselves reading out notes (Maria), a PowerPoint presentation without explanation [James] and a lesson with no activities except the explanation by the teacher (Luciano). Only one of the participants' (James) mentioned that he found school difficult, and he found disruptive students as a challenge encountered in class. Two of the participants (Maria and James) remarked that they always found Maths challenging and both commented that it was the subject itself that they found challenging whilst teachers always tried to help them understand it. One participant (Maria) also mentioned that she found difficulty even in Physics.

There was unanimity among all participants that selective attention was given to subjects, namely to the core subjects and at times the option subjects selected as noted:

"I prefer to give attention to subjects which I will be needing, then History and Geography that I would have forgotten in 10 years' time." [James]

"It is not a question of favourites but the most important. English, Maltese, Maths and option subjects are those which I give more attention. Subjects like Religion and others like it, I consider them as secondary options." [Luciano]

"I give more attention to English, Maltese, hairdressing and beauty, fashion and textiles. This is mainly because I feel I am good in these subjects and …I like learning them." [Maria]

The coping mechanisms exhibited by the average learners when they perceived difficulties in a topic or subject differed greatly than the perseverance exhibited by gifted students. They all submitted that they would ask their teachers for a second explanation without further researching. Only one participant (Luciano) remarked that he would carry out some research through a Google search, but would nonetheless ask the teacher.

"I always try to do my best in my homework…there are things which I see 'extra' but I always try them out …and if I still don't understand I will ask the teacher." [James]

"If we are given homework, I try to complete it to see whether I have understood. If I realise that I have not understood, I will carry out a Google search for some examples or I go

through my notes. I carry out some research ...but if I still do not understand I will ask the teacher." [Luciano]

"If there is something I am not understanding I would read the teacher's notes and will ask the teacher to go into more detail on the topic." [Maria]

In summary, the code motivation for average students emerged much weaker than for gifted students. All average ability participants indicated that they tried their best at school, however when it either came to learn a new topic, or challenges in learning, they mainly relied on the teachers' second explanation, rather than thorough research. Moreover, selective attention was given to subjects.

Responses of parents and teachers

Parents of gifted students

This code emerged strongly from the parents of gifted students (17 references across the three participants). The parents of the three gifted students described the motivation exhibited by their daughters and their perseverance to do well. They described their daughters as independent learners, who study constantly and were geared well for their examinations.

All three participants described their daughters as highly motivated to study and showed great interest to learn:

"I never had any problems with her to learn…something which concerns me is that everything interests her. She is not discouraged by anything." [Jolene's mother]

"With regards to studies, she takes this seriously." [Kayliegh's mother]

"I know she studies and does her best and I never had to chase her to study." [Lina's mother]

All three participants described the perseverance showed by their daughters when they encountered challenges in learning:

"…she could not understand something from her notes and tried to look it up on YouTube…so she keeps searching until she is satisfied…and is certain she has understood." [Jolene's mother]

"…she looks up her notes and if she still does not understand, sends an email to the teacher and the teacher sends back explaining step-by-step and then she tries it out herself." [Kayleigh's mother]

"It was 9 o'clock at night and she was still studying…" [Lina's mother]

Two of the participants also attributed the motivation of their daughters even in their future career aspirations. Jolene's mother spoke about her daughter, who had already taken her decisions on the Intermediate and A 'Level subjects to be studied in Sixth Form. Lina's mother referred several times to her daughter's motivation to study and become a medical doctor. One of the participants showed concern about her daughter's motivation, for fear that this may be the cause of additional stress:

"I do not want her to be stressed…. that's all. To focus and study …yes...but I do not want her to overdo it. That's all. That is what concerns me…because I am fine with whatever she wants to achieve." [Jolene's mother]

Without exception, the participants spoke about their daughters' equal attention to all subjects; however, they all made the point that although all subjects were studied, some subjects such as the science subjects entailed more studying than other subjects, such as Religion and Social Studies. There was unanimity among all participants about their daughters' preparation and to do very well in examinations. Lina's mother also spoke about her daughter's additional examinations in German, organised by the German-Maltese Circle, which were deemed to be very difficult. Lina had passed the first examination and was awaiting the result of her second examination. Lina's mother remarked that such results enhanced her daughter's self-esteem.

In summary, parents of gifted students discussed the motivation and perseverance of their daughters to learn. They studied constantly and independently and were well geared for examinations.

Parents of average students

The participants discussed the challenges their children encounter during learning, however two of them also highlighted the lack of motivation exhibited by their children. All participants remarked on their children's lack of perseverance and their selective attention to subjects.

Only Luciano's mother spoke about her son's motivation to participate in class and time dedicated to study. The other two participants highlighted lack of motivation exhibited by their children:

"The teacher was telling me that he always makes up excuses to go to the bathroom…he hates the subject and will not even revise it…I find past papers to work as additional work, but he won't work them out. He used to work harder in primary school." [James' mother]

"She says that she asks when she doesn't understand, however I know that if she is not interested, she starts chatting with her peers. Teachers told me about this even during Parents' Day…if she perceives the lesson to be boring and she is not understanding…she shuts down." [Maria's mother]

All participants (n=3) spoke about their children's challenges in learning, and the lack of perseverance:

"When he finds something challenging, he sometimes gives up completely. Before he persisted on all subjects, now he only works on those that interest him." [James mother]

"If he finds something challenging, say he does not understand something, I think he would go to ask the teacher the next day for a second explanation." [Luciano's mother]

"My daughter encountered challenges in learning, however she never talks to me about them because to her she is exhibiting her weaknesses. As I said before, she is a proud girl and will not speak about her challenges." [Maria's mother]

Moreover, all participants (n=3) remarked on the selective attention given to subjects by their children:

"Subjects that do not interest him, say Religion…he does not study it…not even History or Geography. He is interested in options and main subjects - Maths, English and Maltese and a language. He is not even doing well in accounts, even though he chose it… because he is not studying it." [James mother]

"It is mainly the main subjects Maltese, English and Maths that I notice he focuses upon." [Luciano's mother]

"Where Physics and Maths are involved, definitely not…not even sciences…these are subjects that do not interest her." [Maria's mother]

In summary, only one participant remarked on her son's motivation particularly in participating in class and dedicating time to studying, whereas the other participants (n=2) remarked on their children's lack of motivation exhibited in class. All participants highlighted

the lack of perseverance when their children encountered challenges in learning and the selective attention given to subjects.

Teachers' responses

Teacher participants remarked on the motivation exhibited by gifted students, their preferred approach to learn something new, and their reactions when they encounter challenges in learning. This, at times, challenged the teachers.

Most of the teachers (n=3) remarked on the motivation exhibited by gifted students (code emerged strongly, 12 references across three participants):

"You prepare three exercises and you end up working five, because they are all the time working. You have to have enough work to keep them challenged and occupied." [Amber]

"…give them exercises to work, worksheets…they are very academic, and they do not get bored…so I always have extra worksheets so that when they complete it, I can provide another on." [Antonella]

"...they want to show you that they know things…they show interest." [Loredana].

Antonella recalled other instances of motivation by gifted students say, involving themselves in many school activities that entailed thinking and reporting, such as National Student Travel Foundation (NSTF) projects and Young Reporters for the Environment (YRE). Antonella also mentioned that gifted students give great importance to formal and informal activities to ensure that they have a "perfect portfolio". Antonella and Loredana also explained that gifted students thought and prepared about their future and they would enquire about subjects they will take in Sixth Form and research on University courses to enquire on entry requirements.

Antonella remarked that when she introduces a new topic, gifted students would have read about it and this helped them. Loredana remarked that in her subject, she felt that students, irrespective of ability, neither carried out background reading, nor any research. The other two teacher participants made no comment about this, except that when they introduce a new topic, both would start building on what students were familiar with, and then move to the unknown and abstract.

All teacher participants (n=4) described different reactions of gifted students when it came to challenges in learning. Only Amber explained a different experience than her colleagues in that gifted students did not necessarily sought clarifications when they were not understanding:

"They do not acknowledge that they haven't grasped a concept, not to mention that they may be very competitive with one another." [Amber]

"…although they still find topics challenging, they persist until they understand it. I feel that although they find something challenging and eventually understand it, they would ask for extra work for home to ensure they would have understood it..." [Antonella]

"…they ask and give attention to details." [Loredana]

Victor recalled a personal experience in class during a discussion about religion and faith. He explained how gifted students argued and queried the matter, citing their scientific knowledge to substantiate their position and express their disagreement.

Teacher participants (n=4) referred to behaviours of lower ability students and agreed that these students gave up easily when they encountered challenges in learning, needed frequent prompting, and tend to cut corners. One teacher also observed that some lower ability students may even find excuses (request permission to visit the bathroom) to avoid the challenging situation in class.

Only Loredana felt that gifted students gave equal attention to all subjects, explaining that they were concerned and focused on their future. The three other participants remarked that irrespective of the students' ability, they gave selective attention to subjects.

All participants (n=4) referred to how gifted students geared up for examinations leading to competitiveness, extra private tuition, and additional pressure on the teacher.

Participants (n=4) explained that pressure was manifested in several ways:

"They tire you out in different ways because of their fast learning pace…and you have to justify marks awarded…and they expect to be given homework daily." {Amber]

"I have to be extremely well prepared…I have extra worksheets prepared so that when they finish one of them, I can provide them with another one…additional research is essential to ensure that I would be able to address their queries…emails from parents seeking an explanation on the awarded grades." [Antonella]

In summary, teacher participants concurred on the motivation exhibited by gifted students for learning including the participation in various school activities. However, the teachers' remarks were not in agreement on whether gifted students carried out background research when a new topic was introduced, whether equal attention was given to all subjects, and

when they encountered challenges in learning. Participants highlighted how gifted students were geared up for exams, leading to additional pressure on the teachers.

Choice of subjects and already set high career aspirations

Gifted students

Without exception, all gifted participants (n=3) chose Chemistry and Biology as their option subjects. Jolene also studied History privately after school hours. The reason given by the participants for their choice of subjects was directly linked to their career aspirations in the medical field. All the participants (n=3) remarked how they always found science subjects interesting, although two of the participants commented that they were difficult subjects, necessitating significant time to study. In fact, one of the participants commented:

"…I always wanted to choose these subjects, in the sense that they are interesting subjects and the more you study them, the more you like them, even though they become more difficult." [Kayleigh]

Jolene found it very difficult to relinquish the History subject because she found it interesting, remarking also that her teacher made it very interesting. She decided to continue studying it privately.

All participants (n=3) had decided what career they wanted to pursue. Jolene and Lina remarked that they had made up their minds at a very young, and even gave their reasons for this. Jolene wanted to become a veterinary surgeon because she loved animals and did not want to work as a medical doctor because of contagious diseases, whereas Lina wanted to work as a medical doctor because she enjoyed helping others. Kayleigh wanted to work in a hospital setting, however she was still undecisive whether she wanted to work either in a hospital laboratory or as a forensic pathologist.

In summary, all the gifted students had made their subject choices related to their (already set) high career aspirations.

Average students

All participants (n=3) chose different subjects, ranging from academic (Accounts, Social Studies, Computing and IT), to vocational subjects (Hairdressing and Beauty, Fashion and

Textiles). When the participants were asked to explain their choice of subjects, they related this to their future career aspirations. However, since doing their choice, only Luciano and Maria remained interested in pursuing careers in the area (albeit not job specific), which were directly related to their choice of subjects:

"When I grow up, I want to work in the IT sector…I love computers. I don't know how I like the sector so much…and obviously gaming." [Luciano]

"I chose these subjects because I like make-up, hairdressing, fashion and clothes." [Maria]

James, the other participant, was no longer interested in the subjects he had chosen and was very undecisive on his career path and commented that "*there are many routes*". His choice of subjects and career aspirations were not in line. He spoke about opening his own business, and either working for the Civil Protection Department, or the Police Academy. On several occasions, he stated that family expectations and pressures were not in line with his own.

In summary, the average students chose different academic / vocational subjects but were uncertain of their prospective and specific career aspirations.

Responses of parents and teachers

Parents of gifted students

Parents of gifted students in unanimity (n=3) remarked that it was their daughters who had chosen the science subjects as options because they were subjects that had always interested them, and they were in line with their career aspirations. All parent participants (n=3) remarked that they did not pressure their daughters into choosing other subjects:

"She knew what she wanted to become. It was not difficult." [Jolene's mother]

"She chose these subjects because she wanted to study them…we were not going to tell her to opt for something that she does not like." {Kayleigh's mother]

"My husband and I never pressured her in subject choices…we left it in her hands. She always wanted to become a doctor and insisted on this when she came to choose her subjects…" [Lina's mother]

Kayleigh's mother expressed her concern when her daughter was about to choose the science subjects, because as parents, they felt they would not be able to support their daughter, since

these were subjects which they had not studied. Nonetheless, they offered their daughter guidance, support and their opinions but did not pressure her to reach any particular decision.

In summary, all the parents of gifted students remarked that it was their daughters who chose the science subjects because these subjects always interested them and were in line with their prospective careers.

Parents of average students

The parents of average students spoke of their children's choice of subjects and how they were unsure of prospective career aspirations.

Luciano's mother and Maria's mother remarked that their children had career aspirations related to their choice of subjects, but they had not decided on any specific job occupation.

"…he chose IT so that in the future he can find a job in line with the area." [Luciano's mother]

"She always says she wants a job related to fashion." [Maria's mother]

James' mother remarked that children were still young to choose subjects in Year 8. During the interview, she acknowledged that she had influenced her son to choose Accounts because she believed there were several job-related opportunities. She referred to her son's aspirations to open a business, albeit still unsure on the type of business (although there were also instances when James mentioned prospects in a legal career, rather than a business).

In summary, all average students' parents concurred that their children made their choice of subjects but were unsure of prospective career aspirations.

Teachers' responses

Without exception, teacher participants (n=4) remarked that gifted students tend to choose science subjects. Antonella pointed out that due to the recent investments in vocational subjects in Maltese schools, gifted students who did well in Science in Year 7 and 8, opted for other subject choices, rather than science subjects. She felt that:

"There are other routes that have 'stolen' capable students who would have pursued a career in science, but they have opted for other subjects." [Antonella]

When it came to career aspirations, all participants (n=4) unanimously agreed that gifted students focussed on their future and knew what they wanted to become. Antonella remarked that gifted students would have even researched eligibility criteria to reach their career aspirations. Loredana felt that parents of gifted students discussed career prospects with their children, even though career information was readily available and gifted students showed interest. Victor made the point that:

"Gifted students know exactly where they want to get to. They do not only plan their departure but also where they want to arrive." [Victor]

In summary, all teachers remarked that there was tendency for gifted students to choose science subjects and were more focused on their career aspirations.

4.2.2 Theme 2

2.0 Ways of learning

Gifted students

All participants (n=3) felt that their Track was meeting their social, emotional, and academic needs, was well organised, and they would not change anything when it came to the grouping in these tracks. Jolene remarked that she was always in the highest Track and that this entailed a lot of studying to remain there. Lina felt that although the highest Track was challenging, it helped her develop further and learn.

The participants (n=3) applied various strategies that they found beneficial for learning (**Table 13)**. They all remarked that they were faster learners than their peers in other tracks.

Name of participant	***Visual learner***	***Reading notes several times***	***Working past papers and extra work***	***Reverse classroom (reading notes, discussions and worksheets)***	***Use of concrete examples***	***Innovative ways such as use of humour***
Jolene	√	√				
Kayleigh	√	√	√			
Lina			√	√	√	√

Table 13 - Beneficial strategies for learning for gifted students

In summary, all gifted students felt tracks were meeting their educational, social, and emotional needs and would not change the groupings in tracks. The participants noted they were fast learners and had various strategies for learning.

Average students

All participants (n=3) agreed that their tracks were meeting their academic, social, and emotional needs. Whilst two of the participants would not change anything in the grouping of the tracks, James remarked that academic grades should not be only considered in the grouping of the tracks because capable students may not do well in their examinations. He suggested that groupings should be based more on formative assessments, rather than examinations and that even syllabi should be revised, explaining there were topics which were repetitive. In addition, he also mentioned that behaviour should also be considered for placement in tracks because he claimed that certain behaviours may be an issue in class and served as distractors. The participants (n=3) responses on the various strategies which they found beneficial for learning are tabulated in **Table 14**.

Name of participant	***Appropriate questioning techniques in class***	***Class discussions***	***Teachers read, explain and dictate notes***	***Visual methods such as PowerPoints***	***Step by step explanations by teacher***	***Innovative ways such as games in class***
James	√	√	√			
Luciano			√	√		√
Maria					√	

Table 14 - Beneficial strategies for learning for average students

In summary, all the average students felt that tracks were meeting their educational, social, and emotional needs. Two of the participants would not change anything in the track groupings. The participants also mentioned several strategies for learning.

Responses of parents and teachers

Parents of gifted students

When the participants were asked on their perceptions of the track system, there was unanimous agreement (n=3) that the tracks were well organised, and they served the academic, social, and emotional needs of their daughters. All participants (n=3) remarked they would not change anything in the way grouping of students takes place in tracks. Jolene's mother also remarked that she felt it was very beneficial that tracks were now co-educational.

When the participants were asked about their daughter's perceived ways of learning they all (n=3) made the point that their daughters made their own notes on which they studied. Jolene's mother remarked that her daughter utilised YouTube whenever she could not understand something. Kayleigh and Lina's mothers also pointed out that their daughters worked exam past papers as part of their study routine. Lina's mother noted that her daughter listens to loud music whilst studying because it helped her concentrate on her studies.

Jolene and Kayleigh's mothers remarked that their daughters were fast learners in class and once they finish their task:

"…so as not to get bored in class, she will read…until the other students finish their work." [Jolene's mother]

"…she is given extra work, or help other students complete their work, write out homework and so on." [Kayleigh's mother]

In summary, the parents of gifted learners unanimously agreed that the tracks were well organised, served the academic, social, and emotional needs of their daughters and would not change anything in the way tracks are grouped. The participants highlighted their daughter's perceived ways of learning.

Parents of average students

When the participants were asked on their perceptions of the track system, there was unanimous agreement (n=3) that the tracks served the academic, social, and emotional needs of their children. One of the participants (Maria's mother) also noted that her daughter found

the track-system better than the banding in primary school. Luciano and Maria's mothers felt that they would make no changes to the present track system, as long as students in the track system are of similar ability (Maria's mother). The other participant (James' mother) felt that rather than relying on examination results, there should be mid-yearly assessments and if students do well, they should have their tracks changed even during the year.

When the participants were asked about their children's perceived beneficial ways of learning, they all (n=3) referred to different strategies used by their children as tabulated in **Table 15**.

	Notes given in class	***Reading and making own notes***	***Revision and extra work***	***Past papers***	***Watching videos***	***Participating in class***	***Research on the internet***	***Quizzes***
James's mother		√	√	√				
Luciano's mother	√				√	√	√	
Maria's mother		√				√		√

Table 15 - Beneficial strategies for learning as perceived by parents of the average students

In summary, all participants perceived that the tracks met the academic, social, and emotional needs of their children. Two of the participants would not change the groupings in tracks. The participants also discussed their children's perceived ways of learning.

Teachers' responses

All participants (n=4) remarked that there were common strategies used in Track 3 classes, including classes of average ability learners, and other strategies used with gifted and talented students as tabulated in **Table 16**.

Teacher's name	*Common strategies used with track 3 classes including classes of average ability learners*	*Strategies used with gifted and talented learners*
Amber	- Critical analysis of text; - Discussions; - Learners as active participants *e.g.*, speaking activities; - Display of their work; - Being empathic with learners and listen to them though maintaining discipline; - Choice of topics / tasks that generate open discussions and are relevant and appealing to the students.	- Engage in dialogue; - Completing worksheets; - Ensuring additional worksheets are available.
Antonella	- Differentiated teaching; - Structuring double lessons to include various activities and hands on learning; - Lessons include various strategies such as games, group work, presentations, inquiry-based tasks; - Use of different resources such as flash cards, mobile, online games; - Various activities used during the lesson, otherwise students become bored; - Group work with different roles; - Homework related to lesson objective to practice what they learnt.	- Lecture method; - Completing worksheets; - Avoiding idle time – more worksheets given.
Loredana	- Group work and peer work; - Questioning techniques; - Discussions; - Criticism of text; - Creating a warm atmosphere in class conducive for learning.	- Engaging in debates; - Group work (gifted students given specific roles).
Victor	- Involving the students; - Relevant examples given including personal experiences; - Knowing the students and being sensitive to their needs; - Using current affairs; - Using emotional literacy.	- Creating a climate in class where students feel safe to express themselves; - Reverse classroom.

Table 16 – Strategies used by teachers with track 3 classes and strategies used with gifted children

Although there were a variety of strategies used with Track 3 students including average ability classes, there were other activities which the participants (n=4) used mainly with gifted students in top-set classes. These included dialogues and debates (n=3), completing

worksheets as additional work and to prevent idle time (n=3), group work (n=1) and reverse classroom (n=1). Loredana remarked that the learning needs of gifted students are different, and teachers expect too much from these students and at times are taken for granted:

"Their learning needs are different. The problem is that gifted students are taken for granted by teachers and we expect that they have more advanced knowledge. That shouldn't be that way. It is not always the case. We expect them that they can make it on their own, but we may be missing some things." [Loredana]

The participants remarked on the challenges they encountered with the strategies used with gifted students. This included the preparation time required for additional worksheets to be used (Amber and Antonella), gifted students preferred not to work in groups (Loredana), and the teacher had to carry out additional research to answer the questions asked by the gifted students (Victor and Antonella). Three of the participants (Amber, Antonella and Loredana) remarked on the gifted students' fast rate of learning.

The participants referred to other specific challenges encountered in classes of gifted students, which included competition between peers (n=3), did not readily concede that they were not grasping a concept (n=1), a passive attitude (n=2) and abstract questions on morality and faith for which there may be no scientific explanation (n=1).

In summary, teachers used an array of teaching strategies with Track 3 students, including average class learners but they use specific strategies including debates and completing worksheets in classes of gifted students. The participants mentioned specific challenges related to the strategies used with gifted students, and other challenges encountered in classes of gifted students, including competition between peers and a passive attitude.

4.2.3 Theme 3

3.0 Work-life balance

3.1 Enjoying leisure activities

Gifted students

Gifted students had a variety of hobbies namely, sports activities and playing a musical instrument (Jolene and Kayleigh), reading and watching television (Jolene and Lina), attending Girl Guides, needlework, and crafts (Jolene).

All the participants (n=3) commented that they did find time for leisure and their hobbies. Jolene remarked that since she had several hobbies, she made a timetable to include a workout, however during the scholastic year, she still found some difficulty to include all her hobbies and her studies. The other two participants (Kayleigh and Lina) confirmed that they had enough time for their hobbies, leisure activities and studies.

Average students

James and Luciano had sports activities as hobbies, whereas Maria preferred going out and draw. All the participants (n=3) commented that they did found time neither for their hobbies, nor leisure activities during the week. James had no time at all for his hobbies, even more so now that he had a puppy to take care of. Luciano only found time for his skateboarding hobby during weekends and the other participant, Maria, remarked that she tried to find time:

"Since you are at school for six hours every day, you are very tired by the time you get home and you do not have much time for other things. But in one way or another you try to find some time for yourself." [Maria]

Responses of parents and teachers

Parents of gifted students

All participants (n=3) identified the same hobbies and leisure activities, as indicated by their daughters, and confirmed that they had time for them. Jolene's mother remarked that her daughter carried a book around the house and she was continuously on the go with her studies and her hobbies, to the extent that her family called her "busy body."

Without exception, all participants (n=3) confirmed the importance of the hobbies and leisure activities for their daughters; not least as a source of relaxation. Jolene and Lina's mothers remarked that their daughters set out a schedule even during the summer so that they would find time to include their studies and hobbies.

Parents of average students

All participants (n=3) identified the same hobbies and leisure activities, as indicated by their children. Without exception, all participants (n=3) remarked that if their children had good

organisation of their time, they would have enough time for their hobbies, leisure activities and their studies. As a matter of fact, James and Luciano's mothers restricted the time their sons allocated for their hobbies and leisure activities, so that they could focus on their studies being their last year before their SEC examinations:

"I told him that he cannot attend basketball during the scholastic year, but he can do so during the summer…hockey and kickboxing he might make it during the winter because he has to study and prepare for the SEC examinations." [James mother]

"He can only enjoy his hobbies during weekends, otherwise during the week I will not allow it." [Luciano's mother]

Teachers' responses

The perceptions of the participants differed greatly when it came to hobbies and leisure activities in gifted children. Amber, who explained obtained this information through an activity she conducted at the start of each scholastic year to get to know her students, remarked that attending extracurricular activities and finding time for hobbies had decreased, and only a few gifted students had time for these.

In contrast, Antonella and Victor remarked that gifted students were committed to extracurricular activities and hobbies, more than students of lower abilities. Antonella attributed this to the Secondary School Certificate and Profile (SSC&P) that gifted students are keen to have, and which they can only do by attending extra-curricular activities.

Loredana distinguished between different types of hobbies and leisure activities related to different track levels. She explained that sports-oriented hobbies attracted the lower tracks while gifted students opted more for musical instruments such as the piano, attending the girl guides or boy scouts, and voluntary activities. Loredana had this insight following discussions, which she held with the students.

Victor commented that gifted students kept themselves occupied during the entire day and practiced hobbies and leisure activities that required regular commitment.

Without exception, all participants (n=4) submitted that most students, including gifted students, did not find time for hobbies and leisure activities and put them on hold because of time constraints mainly related to private tuition, after the school hours.

3.2 Social interactions with peers

Gifted students

Without exception, all participants (n=3) felt that their social relations were not affected by the track system. They confirmed that they had friends in other tracks:

"I never experienced a different attitude from my friends because I am in a different track." [Kayleigh]

Contrastingly, during the interview, Jolene and Lina noted that there were occasions when other students commented because they achieved high grades. This was a concern to them:

"There are students who comment because you are in track 3 and they label you as a smart student…this bothers me." [Lina referring to students from other tracks]

"at times I heard things about me...I think this comes from jealousy since I get very good grades and at times more than my peers." [Jolene referring to students within her class]

In fact, Jolene and Lina referred to the competition within their class:

"…we were friends and then we drifted apart, all due to competition." [Jolene]

"…at times between friends there are conflicts due to grades and other similar things…"[Lina]

However, in general and without exception, all participants (n=3) felt that there was a positive social context in class:

"I get on very well with my classmates…we even go out together even during the summer …we are very close." [Jolene]

"…we get on very well and we are close…" [Kayleigh]

"Overall, I feel we get on well, everyone helps each other, we explain to each other…there was a big change from Form1 to Form 4, like everyone matured and we started helping each other" [Lina]

Jolene and Kayleigh noted that they found no difficulty to make friends, however one participant, Lina described herself as an introvert and found it a bit difficult to make new friends. Nonetheless, all participants (n=3) noted that they had peers whom they considered as friends in the classrooms.

In summary, all participants (n=3) had friends in different tracks and did not feel that the track system affected their social relations. All participants (n=3) had friends in their classrooms

and felt there was a positive social context in their class. However, two of the participants also referred to the competition within their class.

Average students

Without exception, all participants (n=3) concurred that social relations were not affected by the track system and they had friends in other tracks:

"I never experienced a change in attitude from my friends because I am in one track or another." [Maria]

All participants experienced a positive social context in their class, and they had peers which they considered as friends. All participants (n=r) remarked that they found no difficulties to make friends. One of the participants commented that on several occasions, he even studies with his peers.

Responses of parents and teachers

Parents of gifted students

Without exception, all participants (n=3) remarked that they did not feel that social relations were affected by the track system and their daughters had friends in different tracks. All participants (n=3) noted that there was a positive social context in class and their daughters not only had friends in their respective classrooms (n=3), but also went out together during weekends (Jolene's mother) and helped each other (Lina's mother).

Lina's mother remarked that there were instances of competition, within the classroom:

"As my daughter usually explains, it is always the girls and not the boys who compete. For instance, if someone gets one mark more…as if there is some race!" [Lina's mother]

Parents of average students

Without exception, all participants (n=3) remarked that they did not feel that social relations were affected by the track system and their children had friends in different tracks. All participants (n=3) noted that their children had no difficulties to make friends, there was a positive social context in their children's class, and their children had peers whom they considered as friends in their classroom (n=3). One of the participants, Luciano's mother

remarked that teachers often pointed out that he helped his peers in class. Maria's mother commented that her daughter had characteristics of a leader, not least, her charisma towards her peers.

Teachers' responses

There were mixed perceptions among the participants. Amber, Antonella and Loredana remarked that social relations were affected by the track system. Amber commented that all students seemed to keep with peers of similar ability. She further stated that students of lower abilities may experience an inferiority complex and would not mingle with gifted students. Loredana described gifted students as *"loners and prefer to work on their own"* and at times appear to be reserved for other students. Antonella felt that the stigma that lower ability students might have, in addition to their social class, may affect social relations with gifted students.

Only Antonella commented on social relations within the gifted class. According to her, social relations varied from finding it difficult to make friends and not helping one another (even if they were absent from school), to one where the gifted students helped each other, worked together, and even shared notes.

Amber Antonella and Victor commented on the competition experienced in gifted classes:

"At times gifted students do not admit they are finding something difficult and they are very competitive…seeing what grades their peers have obtained and why their grade is more than theirs. Like you have to justify the grades given." [Amber]

"There is a lot of competition with gifted students and at times there is a lot of stress and bullying between them…and when there is high competition gifted students prefer to work on their own rather than group work" [Antonella]

"Frequently, competitive behaviour prevails with gifted students…who will get the highest grade." [Victor]

Amber and Antonella remarked that since classes had become co-educational, the class dynamics had changed and improved because gifted boys are less competitive.

In summary, participants (n=3) felt that social relations were affected by the track system and remarked there was competition experienced among gifted students. However, two

participants observed that co-education had contributed to an improvement in competition between gifted students.

4.2.4 Theme 4

4.0 Influence on learning experience

4.1 Influence of family

Gifted students

All participants (n=3) felt that they were not pressured by their parents, including the achievement of good grades, because this was also their personal expectation:

"I do not feel pressured from my parents to get good grades, because I too like getting good grades. If I don't get good grades, I would be very disappointed at myself, not from my parents." [Jolene]

Without exception, all participants (n=3) felt that their respective family's expectations were in line with their own with respect to achieving high grades (n=3), and prospective careers (n=2):

"I always wanted to become a vet and they always encouraged me to remain focused…if I change my mind and I want to go into archaeology, they will not keep me back …the parents are satisfied with my prospective career choice." [Jolene]

"if sometimes I get less than 75% in a test and I keep querying where I could have done better, they always reassure me and say you have done your best." [Lina]

All participants (n=3) provided several examples of manifestations of family support ranging from emotional support (n=3), the possibility to be supported by private tuition if they encounter difficulties in a subject (Jolene and Lina), and academic support from parents (Kayleigh).

In summary, all participants (n=3) did not feel pressured by their parents, and their parents' expectations were in line with their own. All (n=3) paid tribute to the support being provided by their parents.

Average students

Unanimously, all participants (n=3) felt that they were pressured from their families to achieve good grades:

"I feel pressured to get good grades from my parents, especially on the day results come out." [Luciano]

Without exception, all participants (n=3) made the point that their family expectations were not in line with their own:

"My mother expectations are higher than mine …" [James]

"My expectations are to pass my exams…but at times I feel my mother's expectations are higher, but I do understand her because she wants me to do well…" [Luciano]

"I know my parents have high expectations…but if I feel that these do not suit me, then I will do it my own way." [Maria]

Without exception, all participants felt they were supported by their families and gave several examples including academic support (Luciano and Maria), encouragement (James and Maria) and attending private tuition (James).

In summary, all participants (n=3) felt pressured from their families and their expectations were not in line with their own, however they still felt supported by their families.

Responses of parents and teachers

Parents of gifted students

All the participants (n=3) agreed that their expectations were in line with those of their daughters especially when it came to prospective career aspirations.

Jolene's mother voiced her fears when discussing her expectations for her daughter:

"One thing I am afraid of is that Jolene will give up on her studies and quit…" [Jolene's mother]

Another participant explained:

"We never pressure her…we believe that pressure on children affects them negatively…we believe in her and everyone has their own ways." [Lina's mother]

The participants provided several examples of manifestations of family support, which have been tabulated in **Table 17**.

Participant	*Manifestation of support provided to their daughters*
Jolene's mother	- Accessibility to books (even as young as 6 months of age); - Financial support for academic (private lessons) and sports purposes; - Coaching for less competition with peers; - Time dedicated for extra-curricular purposes.
Kayleigh's mother	- Financial support for academic purposes (private lessons); - Discussions of projects and reviews of assignments; - Selecting books for projects (mother was a librarian).
Lina's mother	- Emotional support; - Financial support for academic purposes (private lessons); - Seeking career guidance for her daughter.

Table 17 – Manifestations of family support of gifted students

Jolene's mother remarked that she was ready to sell her house in exchange of her daughter's career aspirations:

"I told my husband that I am ready to sell our house for her to go abroad and study to become a vet since it is not available locally…I am ready to do everything for her." [Jolene's mother]

Unanimously, all participants (n=3) made the point that since their daughters were independent learners, they did not know what they were doing at school. They trusted their daughters who, in turn, knew they would find support in their parents, should they have needed it.

In summary, all participants (n=3) agreed that their expectations were in line with their respective daughter's, and they gave several examples of manifestations of support. Unanimously, the participants (n=3) remarked that their daughters were independent learners and studied on their own, however they knew they would be behind them, should their support be required.

Parents of average students

Two of the participants (James and Maria's mothers) pointed out that their expectations were not in line with those of their children:

"I wish my son goes to University or Malta College of Arts, Science and Technology (MCAST) …it worries me that he will not study and is now saying he wants to open a business." [James' mother]

"I wanted her to choose academic subjects, rather than vocational subjects since she is intelligent. I am afraid that the hairdressing subject is chosen by students who are not academically apt. Her career aspirations are less than she can actually achieve." [Maria's mother]

James' and Luciano's mothers openly spoke on the restrictions in sports and leisure activities of their children, so that their studies were not affected.

Luciano's mother claimed that she made no pressure on her son to achieve good marks, since this would contribute to unnecessary tension, however she did remark that:

"Obtaining 50% is a pass mark, he will pass, but I am not happy with this mark…I tell him if you get 70%, then study a bit more to get 80%...and I think this encourages him to persist further." [Luciano's mother]

Maria's mother remarked that she did not pressure her daughter, admitting that her daughter would still do things her way, however she always advised Maria that she was there, should she require support:

"Do your best and leave the rest. Your best is good enough for me." [Maria's mother]

The participants provided several examples of manifestations of family support as noted in **Table 18**.

Participant	***Manifestation of support provided to their sons/daughter***
James' mother	- Looking up past papers and extra work; - Studying together; - Carrying out revision with James and supporting him in his homework; - Financial support for academic (private lessons; - Sending emails to James's teachers for study links, additional explanations and correction of work.
Luciano's mother	- Emotional support.
Maria's mother	- Support when necessary.

Table 18 – Manifestations of family support of average students

It must be pointed out that one of the participants (James' mother) was very aware of the subject topics being taught at school.

In summary, two participants remarked that their expectations were not in line with those of their children. Two participants restricted sports and leisure activities for their children, so that their studies would not be precluded.

Teachers' responses

Amber, Antonella and Loredana noted that the parents of gifted students had expectations that were in line with those of their students. They discussed pressures, which they claimed they had experienced by these high expectations such as:

"There is comparison of the topics being carried out, homework, essays…I am not sure whether it is the parents or the students who compare but the parents come to report to the Head of School." [Amber]

"Unfortunately, there are parents that impose a career path on their children…" [Loredana]

"Parents of gifted students push them further over and above the bar." [Victor]

Amber, Loredana and Victor remarked that nearly all the parents of gifted students would attend Parents' Day and that the attendance of parents diminished in the lower tracks. One participant noted:

"…parents of students in the higher tracks value learning and ask to see how they can support their children better. Parents of children in higher tracks take action and say if behaviour was an issue, there is improvement after Parents Day." (Loredana)

Antonella remarked that gifted students had highly supportive parents, who readily paid for private tuition, to ensure good grades. She remarked that:

"Average students are supported by their parents; however, I feel they give up when they see their children giving up and say I will not push him since he will not make it. Parents of gifted students persist and send emails for clarification on how their son/daughter obtained that grade, etc." (Antonella)

Data indicated that another participant (Loredana) remarked that parents of gifted students frequently discussed with their children, potential career prospects (this has already been referred to under Theme 1.1 Choice of subjects) and had already set high career aspirations.

In summary, participants (n=3) remarked on the gifted student parents' high expectations, which was in line with those of their children and that nearly all parents of gifted students attend for Parents' Day (n=3). Another participant noted that parents of gifted students were highly supportive.

4.2 Influence of school activities and class interventions

Gifted students

A common view among all participants (n=3) was their positive school experience. Various reasons were given, mainly that the school was very organised (Jolene and Kayleigh), there was discipline (Jolene), a welcoming environment (Kayleigh), dedicated and supportive educators (Kayleigh and Lina), and a good transition (Lina).

Without exception, all participants (n=3) felt that their learning needs were being met by their teachers and felt that they were well-prepared for the lessons, and used appropriate teaching strategies, examples of which have been listed in **Table 19**.

Participant	***Examples given about their well-prepared teachers and teaching strategies used***
Jolene	- Discipline in the classroom; - Extra work is given when students find difficulty to understand; - Teacher realises when you are not understanding and offers a second explanation; - Challenging work is given to reinforce concepts learnt.
Kayleigh	- Teachers are well organised; - Provide good notes and a good explanation supported by resources; - Includes all students in the class; - Give work constantly; - Dedicated teachers; - Use various teaching strategies that help you understand and remember.
Lina	- Work given from SEC past papers even in Year 9 (challenging work); - Teachers using the reverse classroom method, which allowed ample time to discuss, work handouts, have practical sessions, *etc*; - Use various and innovative teaching strategies, including humour that help you understand and remember; - Extra work is given and corrected.

Table 19 – Examples given by the participants about their well-prepared teachers and teaching strategies used

Jolene remarked on what had happened when there were students with different abilities in the classroom, and who had a slower learning pace:

"The teacher was more helpful with these students and we used to have more extra work whilst she was giving another explanation to these students." [Jolene]

Unanimously, the participants (n=3) felt their teachers were very supportive:

"If I do not understand something, some teachers give additional support through Teams…teachers always help me focus on the subject" [Jolene]

"…they always used teaching strategies that you will remember…and if you do not understand something they will explain…" [Kayleigh]

"When exams are approaching I work a lot of extra work. Nearly all teachers support me on this. provide extra work and even correct them for me…if there is something I cannot understand, some of them even meet me during recess when I have a difficulty, and other teachers come near me for another explanation." [Lina]

Lina felt that some teachers made differential treatment with classes of different abilities. She remarked that teachers told gifted students in her class that:

"they should not be talking amongst themselves, study, be on their best behaviour because they should be giving an example to the school."

Lina remarked that when they go to lower ability classes, teachers showed differential treatment in that they did not tell them to stop talking or be on their best behaviour.

All the participants (n=3) discussed their preferred school activities and less preferred activities (n=2). Unanimously, the participants (n=3) preferred the school panto and sports activities, which they felt provided them with several skills and memorable experiences. Other preferred activities included the different clubs during break time (Jolene and Lina) and enactment during History lessons (Lina).

Less preferred activities mentioned by the participants included field work and group work (Kayleigh) because of issues in team dynamics, lecture-type lessons, and lessons that only involved writing down notes (Lina).

In summary, all participants (n=3) felt that they had a positive school experience and that their learning needs were being met by their teachers who were supportive, well-prepared

for the lessons and used appropriate teaching strategies. The participants (n=3) preferred school activities such as the school panto and sports activities, however two of the participants were not keen on fieldwork and group work or lecture type lessons.

Average learners

All participants (n=3) remarked they had a positive school experience, reasons given that their school was welcoming, there were appropriate learning strategies (Maria), and discipline more than in other schools (James), which helped students mature (Luciano). However, James felt that teachers (and his parents) had high expectations for him.

Luciano and Maria felt that their teachers were well prepared and used different teaching strategies to help students understand. All the participants (n=3) felt that their learning needs were being met by their teachers, who used appropriate teaching strategies, examples of which can be seen in **Table 20**.

Participants	***Examples given about teaching strategies used***
James	- Class discussions; - Questions asked by the teacher; - Quizzes.
Luciano	- PowerPoint presentations; - Games; - Taking notes in class; - Group work.
Maria	- PowerPoint presentations; - Humour used in class; - Quizzes.

Table 20 – Examples given by the participants about teaching strategies used by their teachers

When it came to preferred school activities, Luciano remarked that school outings were beneficial. Less preferred school activities were pointed out by all participants (n=3) and included PowerPoints without any explanation (James), lecture type of lessons (Luciano and Maria), and reading out notes without explanation (Maria).

All participants (n=3) felt that most teachers understood their learning needs and were supportive. James felt that disciplined teachers were more supportive, whereas Luciano and

Maria remarked that most teachers were understanding and approachable and would try various strategies to facilitate learning. However, James and Maria spoke about their experiences of lack of support from certain teachers:

"I had teachers where I used to show them that I was not grasping the subject and I would raise my hand, but no action was taken. They continued the lesson and ignored me…I raised my hand and said they will get back to me, but they never did. I think they would be pressed for time to cover the vast syllabus…that's why." [James]

"There are instances where the explanation is not done well…just reading something and that's all." [Maria]

In summary, all participants (n=3) had a positive school experience), felt that their learning needs were being met by their teachers by appropriate teaching strategies and most teachers understood their learning needs and were supportive. Less preferred school activities were highlighted by all participants (n=3) and two of the participants spoke about their experiences of lack of support from certain teachers.

Responses of parents and teachers

Parents of gifted students

Without exception, all participants (n=3) felt that their children always had a positive school experience. They gave various reasons including no issues with the school (Jolene's mother), teaching was of high quality (Jolene and Lina's mother), no transitions were necessary since middle and secondary were in the same school (Kayleigh's mother) and the discipline at school (n=3).

All participants pointed out that teachers understood the learning needs of their daughters. Kayleigh and Lina's mothers pointed out that teachers were always well prepared and very supportive:

"My daughter panics when she cannot understand something and sometimes sends an email to her teachers, who even reply during the weekend. They go beyond…if issues are encountered in the extra work given, teachers send recordings to explain." [(Kayleigh's mother]

"Teaching was always of high quality with hands-on activities…some teachers send messages over the summer to see how the students are doing and to continue studying and enjoy the summer. They are dedicated teachers." [Lina's mother]

Two participants also highlighted strategies used by teachers and which their daughters found beneficial. These included challenging extra work taken from SEC exam past papers (Kayleigh's mother), and the reverse classroom (Lina's mother). The participants (n=2) also highlighted the preferred school activities of their daughters, namely the school panto, projects, and competitions (Kayleigh's mother,) and clubs during break time (Lina's mother). Jolene's mother provided limited information on strategies used by teachers and preferred school activities. She clarified that Jolene was a very independent person and moreover, the individual needs of her other son took most of her time. The participants (n=3) did not identify any school activities which their daughters less preferred.

In summary, all participants (n=3) felt that their children had a positive school experience, teachers understood the learning needs of their children, were always well prepared, and were supportive. The participants (n=2) referred to the strategies used by teachers and which their daughters found beneficial and to their children's preferred school activities. None of the parents could identify school activities which their daughters less preferred.

Parents of average students

All participants (n=3) felt that their children always had positive school experiences. They gave various reasons including that teaching was of high quality, there was discipline at school, focus was on the holistic development of the students and not just the academic component (James's mother), and their children were happy at school and never complained (Luciano and Maria's mother). James' mother also highlighted that her son was out of catchment area and was meant to be in another school, but she had arranged for her son to attend this school.

A common view among participants (n=3) was that teachers understood the learning needs of their children and were supportive:

"…all teachers help him and even during online lessons they used to send him even video links to help him understand." [James mother]

"Teachers understand him, and he participates in class. We never had any problems and teachers use all means possible to help him understand." [Luciano's mother]

"If the teacher reads the notes or explains them without involving the students, my daughter will shut down and not understand anything. It is a challenge for my daughter to follow and understand a lesson if she does not participate." [Maria's mother]

In summary, all participants (n=3) felt that their children had a positive school experience, teachers understood the learning needs of their children and were supportive. The participants (n=3) remarked on their children's preferred school activities and one participant identified school activities her daughter found less appealing.

Teachers' responses

All participants (n=4) felt that they understood the students' learning needs through various ways:

"I try to get to know what interests them and what they find less inspiring." [Amber]

"I understand them and try to challenge them on prospective careers and encourage them to remain open for opportunities." [Antonella]

"I get to know them inside-out and I ask about their learning needs, even with LSEs. I try to create a nice class environment, conducive for learning. So even if they don't like English, they are attentive and participate." [Loredana]

"I try to be positive in the delivery of my lessons, so students can feel comfortable to talk. I am also aware that some students may have books at their mother's house or their father's house. So, most of the work is done in class and if I have a revision paper I upload it on Teams to be accessible from anywhere." [Victor]

Without exception, all participants (n=4) pointed out that the track system was beneficial for students with different abilities as noted:

"If someone fares better than me, I will take a step back. A teacher's pace tends to be determined by those students who best grasps the lesson. Consequently, I am aware that I may not necessarily reach out to students with lower ability…" [Loredana]

"I make use of different examples depending on the ability of the students." [Victor]

All participants (n=4) pointed out the specific challenges encountered in classes of gifted students that has already been discussed under Theme 2 Ways of Learning.

All participants (n=4) had high expectations for gifted students. They pointed out that they could discuss with them like adults (Amber) and assign enough work so as not to waste their time and leave them idle (Antonella).

The participants also highlighted preferred school activities for gifted students, which included treasure hunts (Amber), projects and competitions involving creativity and competitive aspects (Antonella), quizzes and debates (Loredana and Victor).

In summary, all participants (n=4) felt that they understood the students' learning needs and that the track system was beneficial for students with different abilities. Without exception, all participants (n=4) had high expectations for gifted students and exemplified preferred school activities for gifted students.

4.3 Conclusion

School experiences surrounding teaching and learning can vary among students, however for gifted students, one of the most important findings in this study was the motivation and perseverance they had for learning. Significant study time was spent to maintain their level and organisation skills especially for time management purposes and exam preparations. The gifted students did not experience high expectations from their parents, and they chose subjects that interested them. Furthermore, they already had set high career aspirations.

All student participants and their parents felt that the tracks were supporting their academic, social, and emotional needs and would not change anything related to grouping. Since gifted students learned faster than their peers, there were strategies which they found beneficial for learning, whereas the average participants preferred teacher-centred learning. It was crucial that teachers identified the unique needs and interests of students in classrooms, addressed these characteristics and adapted the curriculum for students to find it meaningful. Teachers also remarked on the gifted students' fast way of learning and the challenges they found with the strategies employed with gifted students, including preparation time for additional worksheets and additional research. Gifted students had a variety of hobbies and leisure activities and they found time for themselves, whereas the average participants who also had hobbies and leisure activities, found no time for them.

Although there is a plethora of research claiming that gifted students had social difficulties, this research found no evidence of difficulties in social relation for both the gifted and average participants, and they were not affected by the track system. Interestingly, teacher participants had different perceptions on social relations.

Gifted students did not feel pressured by their parents and their family expectations were in line with their own. They paid tribute to the support they received from their parents. The average participants felt pressured by their parents to get good grades and reported that their family expectations were not in line with their own.

Positive school experiences were reported by gifted and average students and both groups felt that their learning needs were being met by the class teacher. Learning experiences and preferences of gifted students seemed very similar to average participants, even though gifted students gave additional examples of appropriate teaching strategies they found useful. Both parents of gifted and average students' participants agreed that teachers understood the learning needs of their children and were supportive.

Chapter 5 – Discussion

5.1 Introduction

The purpose of this study was to explore how gifted students coped with their daily lives in regular schools as learners, focusing on the impact of the diverse teaching experiences they experienced in regular classrooms as gifted learners. The inductive analysis of the interview data for the gifted and average students, their parents and teachers led to the identification of four themes and three sub-themes. Overall, the school experiences of the gifted and the average participants were positive and together with their parents, they felt that tracks supported their academic, social, and emotional needs. Gifted participants learned faster than their peers and there were strategies they found beneficial for learning, whereas the average participants preferred teacher-centred learning. Teachers also remarked on the gifted students' fast way of learning and the challenges they encountered to implement the strategies used for gifted students.

Both gifted and average participants had a variety of hobbies and leisure activities, however whereas gifted students found the time for them, it was not the case for average students. Neither the gifted nor the average participants had difficulties in social relations, and they were not affected by the track system. Gifted student participants differed from average learners in that they did not feel pressured by their parents and their family expectations were in line with their own. As for the average participants, they felt pressured by their parents to achieve good grades and their family expectations were not in line with their own. Overall, both gifted and average participants had similar learning experiences and preferences and they felt that their learning needs were being met by their teachers.

The next sections discuss the main themes and subthemes in relation to the wider literature and the narrative literature review.

5.2 Theme 1: Motivation and perseverance

The strongest finding to emerge from the analysis of this study was the motivation of gifted students. This code was referenced 22 times among the gifted student participants, 17 times

among the parents of the gifted students and 12 times among three of the teacher participants. The results of this study indicated that gifted students enjoyed learning, were highly motivated to learn and persevered when they perceived difficulties in a topic / subject. Various examples of motivation exhibited by gifted students were given during the interviews by the different participants, including dilemma in choice of subjects, challenging subjects seen as opportunities of self-confidence and sense of achievement (gifted participants), motivation for future career aspirations (parents of gifted students), involving themselves in school activities / projects, and preparing for their future (teacher participants). Similar observations were made in other research studies where, manifestations of motivation in gifted students included engagement in challenging tasks, commitment to difficult activities and enthusiasm for learning (Renzulli, 2002; Vallerand et al., 1994). Research carried out with students attending secondary school for gifted students by Urhahne and Ortiz (2011) confirmed that enduring ambiguity and uncertainty, and exhibiting higher creativity accomplishments were also indicators of motivation.

It was interesting to observe that all teacher participants remarked on the perseverance of gifted students when it came to either challenges in learning, or their inquisitive nature within the classroom, bar for one of the teacher participants, who indicated that gifted students did not necessarily ask questions when they were not understanding. A possible explanation was competition among gifted students, which may lead them to refrain from asking questions in the presence of their colleagues. This was consistent with Watts (2020); in her research on gifted boys aged between the ages of 9 years and 11 years, she found that although gifted students wanted guidance and support from their teachers, they wanted it discreetly for fear of losing their "gifted identities" (p. 50). Clickenbeard (1989) also maintained that competitive environments may have negative effects on gifted students especially when it came to formulate long term goals. One of the parents of gifted students also highlighted her concern over her daughter's motivation for fear of additional stress.

The significant study time, which gifted students spent to maintain their level and organisation skills, especially for time management purposes and exam preparations, was another interesting finding associated with motivation. These findings corroborated with the findings from the analysis of the parents of gifted students who commented that their daughters are independent learners, study constantly and are geared well for examinations.

These findings also matched those identified from the teacher participants who referred to gifted students gearing up for exams, leading to competition, additional private tuition, and additional pressure on the teachers.

There were further motivation indicators. For instance, although two of the participating students commented that more focus was given to their option subject, the other gifted participants afforded equal attention to all subjects. This was corroborated by their parents who remarked that, although subjects such as science subjects required more studying than other subjects. This finding contrasted with the teachers' perceptions where three of the teacher participants remarked that irrespective of the ability of the students, selective attention was given to subjects. Only one teacher participant remarked that gifted students gave equal attention to all subjects. It was possible that although gifted students studied all subjects and sat for the examinations of all subjects, they felt that some subjects warranted more study time than others. This was suggestive of teachers not seeing the holistic scenario; rather, they were more focused and concerned with their own subject.

Other motivation indicators exhibited by gifted students included perseverance when encountering challenges in class (talkative students, dictating and writing out notes) and the coping mechanisms demonstrated when they finished classwork earlier than their peers. The finding on motivation indicators did not reflect the findings of the narrative literature review. However, the context of this research was not similar to the contexts reported in the narrative literature review. For instance, Watts (2020) reported on behaviours of gifted boys (talking with peers and reading unrelated material) perceived by teachers as defiant behaviour. Watts' (2020) data subjects were 10 male gifted students with ages ranging from 9 years to 11 years, and coming from different cultural backgrounds and socio-economic classes. Moreover, the educational system which provided the setting for Watts' research was completely different from the Maltese setting. Watts' research concluded that there were different contextual instances where gifted students may experience waiting time, which was not experienced by each gifted student and was not seen essentially boring, if they perceived that it was beneficial for them. This was similar in the local context where the waiting time was utilised to complete extra work.

The findings from the gifted students' interviews indicated that they had no role models, although one participant qualified that her determination drove her forward. Their

expectations were in line with those of their parents and teachers. They felt supported by their parents and felt no pressure from them. On similar lines, Olszewski-Kubilius (2001) and Al-Dhamit and Kreishan (2016) found that the family environment effected the motivation of gifted students; the more parental support, the higher the motivation. Almost all participants did not feel they were pressured by their teachers, except one participant who felt that gifted students were pressured by their teachers.

The probe on the extent of background reading by students prior to the introduction to a new topic brought different responses by teachers.

In the cases of average students, the code motivation emerged much weaker (n=3 across three participants) than for gifted students. When compared to the gifted participants, lower levels of motivation were observed for average learners especially when they found new topics challenging, challenges in learning, and ways of coping with challenges. Most of the average learners' parents (n=2) highlighted the lack of motivation exhibited by their children.

Average students demonstrated less perseverance than gifted students. Gifted students persevered when they perceived difficulties in either a topic or subject and, *inter alia*, carried out research, worked additional tasks and past papers, studied their notes, and asked their peers and teachers. Average students tried to do their best at school and made additional efforts at home but relied on the teachers' second explanation. This finding was also supported by all the parents (n=3) of the average students who commented on the lack of perseverance their children demonstrated when they encountered challenges in learning. This view was also echoed by the teacher participants who commented on the behaviours of lower ability students and agreed that they gave up easily when they encountered challenges in learning, required frequent prompting and tended to cut corners to avoid challenging situations. This also accorded with the findings of Gottfried, A.W., Gottfried A.E., and Wright Guerin (2006) that gifted students were more motivated, worked harder, and learned more than their non gifted peers. They were described as "independent (self) learners; internally controlled; persistent; perceptually strong; non-conforming; and highly motivated" (Griggs, 1984, p. 429).

These findings were consistent with the findings of a great deal of previous work on motivation, related to the fact that motivation is multifaceted (Linnenbrink & Pintrich, 2002),

it is a critical factor for high performance and achievement (N. Phillips & G. Lindsay, 2006), motivation together with cognitive skills is necessary to do well in school (Pintrich & Schunk, 2002) and the motivation levels of gifted students were higher than their non gifted peers (Urhahne & Ortiz, 2011). This can be explained by the higher levels of intrinsic motivation that gifted students were reported to have when compared to their non gifted peers (Chan, 1996; Clinkenbeard, 2012; Davis & Connell, 1985; Gottfried A.W. et al., 2006; Hornstra et al., 2020; Skollingsberg, 2003; Vallerand et al., 1994). This differed from the findings of Altun and Yazici (2014) who reported that the motivation of non gifted peers was higher than that of their gifted peers, as a result of the school environment and curriculum in a mainstream class was frequently not appropriate to their needs, thereby affecting the motivation of gifted students negatively. This finding contrasted with the findings of this research which could be attributed to the track system coupled with the small number of students in local classes and teaching strategies which appeared to contribute to a positive learning experience for gifted students.

Findings demonstrated that whereas gifted students had no particular subjects which they found challenging but only found challenges for particular subject topics, almost all (n=2) average participants had subject/s which they found challenging. A possible explanation is due to the average participants encountering these challenging subjects, and their motivation was being affected negatively. This was identified in the research carried out by Vallerand et al. (1994) with students of average age 10.1 years, attending the same school. Vallerand et al. found that motivation decreased whenever individuals experienced events which made them feel inept.

Challenges encountered by gifted students in class either included talkative and disruptive students, or when the teacher dictated the lesson at a fast pace, and they wrote out notes without actually understanding. Average learners listed even more challenges encountered in class, including teaching strategies used in class, which mainly referred to reading out from notes, a PowerPoint presentation without explanation, lessons without activities, and disruptive students.

In contrast with their gifted peers, all average student participants gave selective attention to subjects (core subjects and at times option subjects), which was also confirmed by their parents. To elaborate on this finding, it has to be appreciated that whereas gifted students

ascertained that they fared well in the subjects which they perceived mattered most for their future, average peers arguably studied subjects just enough to make it to post-secondary.

The emergent theme of *motivation and perseverance* replicated the findings of the narrative literature review (*teaching and learning experience*), which suggested that gifted students had the necessary motivation, aspirations, dedication to learning and aptitudes to plan and set the goals they desired together with the self-discipline and positive attitude when faced with challenge (Lam et al., 2018).

5.2.1 Choice of subjects and already set high career aspirations

It was a very interesting finding that all the gifted participants (n=3) chose Chemistry and Biology as their optional subjects, whereas the average participants chose different subjects from the academic and vocational paths. This was confirmed by the parents of the gifted participants (n=3) who remarked that their daughters were always interested in science subjects and they did not pressure their daughters into choosing them. This was confirmed by all the teacher participants who remarked that gifted students tend to choose science subjects. At face value, these findings contradicted research in the local context by Musumeci and Pirotta (2018) that remarked gifted students tend to opt for science subjects due to various factors including parents, peers and cultural influences and the perception that these subjects were for gifted students. However, it was also likely that gifted students were influenced either directly or indirectly to choose certain careers over others by perceived social impacts and prospects (Jung, 2012; Jung & McCormick, 2011; Jung et al., 2011).

Reasons for the choice of subjects was somewhat similar to both the gifted and average participants which was directly linked to their career aspirations, bar one of the average participants who was no longer interested in the subjects he had chosen. All the gifted participants (n=3) found science subjects interesting, although two of them commented that they were difficult subjects and necessitated significant time to study. This finding built upon other research findings that gifted people choose careers that suited their abilities, personal interests (Lubinski & Benbow, 2006) and that they found stimulating, gratifying, and intellectually challenging (Jung, 2014, 2017). These results seemed to be consistent with other research that indicated that there was a strong tendency of gifted students to opt for science learning (Kahyaoglu, 2013; Yang et al., 2014). Another point worth highlighting was

the multi potentiality in gifted students, defined as "the ability to select and develop any number of career options because of a wide variety of interests, aptitudes and abilities" (Kerr, 1990, p. 1). Pfeiffer (2013) qualified further that this could complicate career selection for gifted students because of their vast abilities and enhanced skills providing them with more options and choices for selection. Therefore, whilst career advisors should guide gifted students in their educational and career journeys, they should do so with full mindfulness of their multipotentiality, hence ensuring that the values and interests of the gifted students were prioritised.

The gifted participants had already decided on their career aspirations and the job they wanted to pursue, whereas the average participants were still unsure at that same age. This was also confirmed by the parents of the average students (n=2) who, somewhat concerned, remarked that although their children had career aspirations related to their choice of subjects, they had not yet decided on specific job occupations. This situation, however, did not necessarily flag any shortcomings from the students'; students' interests that may change over the years due to various factors including awareness of new opportunities, growing up, and maturing. This was commonly experienced by students who were planning their prospective career aspirations (Di Fabio et al., 2013). One particular research study concluded that a country's education system prescribed the timing when career decisions had to take place (Patton & Creed, 2007). Malta, like many other European countries, required students to select their academic / vocational path at an early stage, between 12 years and 13 years of age. This career choice was experienced by Maltese students earlier than other youths in other countries. This early career choice, which may be a cause of indecisiveness, was being experienced at an earlier stage.

It was noted that one of the average participants who was no longer interested in the subjects he had chosen, mentioned career aspirations that were not in line with the subjects chosen. He also repeatedly stated that family expectations and pressures were not in line with his own. This was acknowledged by his mother who remarked that students were young to choose subjects in Year 8 and she had influenced him to choose the subjects because she believed they led to several job opportunities. This contrasted with the approach taken by the parents of one of the gifted participants who felt that although they would not be able to

support her in the selected science subjects, they would still offer their daughter guidance and support but, did not pressure her to reach any particular decision.

Interestingly, all teacher participants (n=4) unanimously agreed that gifted students focussed on their future and knew what they wanted to become. They gave several examples demonstrating this, including gifted students researching eligibility criteria to reach their career aspirations and discussing career prospects with their parents and career guidance services. This was seen as positive by the teachers, but it contrasted with findings in the literature that they may not make "mature career decisions" (Greene, 2006, p. 37) and may even exclude novel and innovative career opportunities (Kerr, 1991).

5.3 Theme 2: Ways of learning

All gifted participants (n=3) and their average ability peers (n=3) agreed that their respective tracks were meeting their academic, social, and emotional needs. All the gifted participants (n=3) felt that tracks were well organised, and they would not change anything when it came to groupings in tracks. This finding supported the findings of other studies that gifted students usually had positive school experiences (Moon, 2009). Two of the gifted participants acknowledged that the highest track was challenging and entailed studying to remain there. Two of the average student participants would not change anything in the track groupings. One of the average student participants remarked that groupings should be based more on formative assessments and behaviour rather than academic grades only. The perception of the parents of the gifted students (n=3) and the parents of the average students (n=3) was positively unanimous, that the tracks served the academic, social, and emotional needs of their children.

This finding that gifted and non gifted students, together with their parents, felt that the tracks were well organised and would not change anything when it came to grouping was contrary to previous studies which had suggested that tracks contributed to social inequality (Boaler, 1997; Chowcase, 2022). However, in the Maltese context Maltese students can be in different tracks for the different core subjects while receiving the necessary support. Moreover, they were in mixed ability classes and following the same core curriculum for the other subjects. This could be contributing to the students (and parents alike) feeling that the

track system was not causing social inequality; rather, it was meeting the students' academic, social, and emotional needs.

When discussing strategies for learning, gifted learners acknowledged that they learnt faster than their peers and they had various strategies that they found beneficial for learning. These included reading notes several times, the reverse classroom, use of concrete examples, working exam past papers and extra work. The average participants also discussed various strategies they found beneficial for learning, including the teacher reading, explaining, and dictating notes, visual aids, step by step explanations, and class discussions. Both gifted and average students found visual aids and innovative ways useful for learning. It was evident that the strategies the students' found beneficial for learning tended to demonstrate independence, commitment, and motivation of gifted students, whereas the non gifted participants preferred the teacher-centred learning. This was identified by other researchers who asserted the same point in that gifted students preferred an independent learning style (Chan, 2001; Singh, 2009). Through his research, albeit limited to science learning, Kahyaoglu (2013) found that non gifted students preferred teacher-centred learning.

Two of the parents of the gifted students remarked that their daughters were fast learners and even mentioned their coping strategies in class once they finished their task. The perceptions of parents of gifted students on their daughters' way of learning were in line with those given by their children, mainly making their own notes, researching, and working exam past papers as part of their study routine. One participant also noted that her daughter listened to loud music whilst studying, to help her concentrate. The perceptions of the parents of average students differed from those given by their children. The average parent participants perceived that their children's way of learning included making their own notes on which they studied (n=3), participating in class (n=2), research on the internet, quizzes, extra work, and past papers (n=1). Only one of the parents of the average students mentioned class notes, which was indicative of the average participants' strategies for learning.

Teacher participants remarked on common strategies used with Track 3 classes, including classes of average ability learners and other strategies used with gifted learners. Common activities used with gifted students included dialogue and debates, completing worksheets as additional work to prevent idle time (n=3), group work and reverse classroom (n=1). It was

crucial that teachers identified the unique needs and interests of students in the classroom to address these characteristics and adapt the curriculum accordingly for the students to find it meaningful. A remark made by a teacher participant that the learning needs of gifted students were different, and teachers took gifted students for granted and expected that they already knew certain things and could make it on their own was interesting to hear. This finding was supported by the findings of other researchers, who reported that teachers believed that gifted students required no additional support because they were already privileged and would succeed anyway (Bakx et al., 2019; Bannister, 2016). Findings by other researchers pointed out that gifted students required structure like other students would require (Bakx et al., 2019). Other researchers had reported that teachers provided more support and guidance to lower ability students than gifted students and the latter were left working independently (Deunk et al., 2018; Freedberg et al., 2019; Laine & Tirri, 2016). This could lead to the topics and tasks in mainstream classes being less challenging for gifted students. Although this finding was pointed out by one teacher, students neither inferred, nor claimed that they were not supported by teachers. It was considered possible that the track system may be counteracting this because students were being grouped in the different ability groups.

The teacher participants remarked on the fast rate of learning gifted students (n=3) which agreed with the findings from the gifted participants and their parents. These results seemed to be consistent with other research findings, where gifted students had a faster pace of learning and required less repetition (O'Reilly, 2014). The teacher participants remarked on the challenges they found with the strategies used with gifted students. These included the preparation time required for additional worksheets, the additional research required to answer their questions, and that gifted students preferred not to work in groups. It was interesting to note that teacher participants prepared additional work for the gifted students to avoid idle time, which could result in boredom or doing other tasks in class, such as reading and drawing. This replicated previous research results (Cooper, 2009; Peine & Coleman, 2010). Preference to work alone was consistent with previous research (Davis & Rimm, 2004; Kanevsky, 2015). This finding contrasted with more recent research where gifted students preferred to work alone only if they perceived that the learning and social environments were not supportive (Cera Guy et al., 2019).

Other specific challenges encountered in classes of gifted students included competition between peers (n=3), a passive attitude (n=2), did not readily concede they were not grasping a concept and abstract questions on morality and faith for which there may not be a scientific explanation (n=1). The latter finding was in line with Chan (2001) finding of gifted students enjoying discussions on controversial topics.

The emergent theme *ways of learning*, did not replicate the findings of the narrative literature review (*Teaching and learning experiences*) in that the latter claimed that gifted students in mainstream classes experienced lack of challenging activities and had to find ways of occupying themselves because they finished their work quickly. They felt bored and not challenged such that they felt schools limited their progress and were not motivating (Tereshchenko et al., 2019; Watts, 2020). This lack of replication may be attributable to the Maltese setting. In the main study of this research, all the participants (gifted and average students) were in tracks which they felt catered for their academic, social and emotional needs. Moreover, teachers remarked on the common strategies they used in Track 3 classes and the challenges they encountered to prepare strategies to support the needs of the gifted learners.

The findings of the emergent theme *ways of learning* were similar to those of the narrative review (*Teacher -student relation*), *i.e.*, gifted students preferred to work alone (Kanevsky, 2015) and teachers took gifted students for granted and expected them to make it on their own (Watts, 2020). The narrative literature review revealed that the teachers held stereotypical views of gifted boys' and girls' performance at school. The findings of this research did not demonstrate this, potentially because in Malta, gender equity was highly promoted in schools.

5.4 Theme 3: Work-life balance

5.4.1 Enjoying leisure activities

All gifted participants had a variety of hobbies and leisure activities, which included sports and playing musical instruments. They all remarked that they had time for their hobbies; one of the participants even drew up a schedule to help her include all of them. The average participants also had a variety of hobbies and leisure activities, but they all commented that

they did not find time for them during the week. This finding was similar to that in previous research where gifted students were reported to spend more time on academic and non-academic activities than the lower ability students, and gifted girls were found to participate in a variety of activities (Makel et al., 2011). This could not be confirmed by the findings of this study because all the identified gifted participants were girls, however they all had a wide variety of sports and leisure activities in which they participated in. A more recent study also confirmed that gifted students spent an average day on activities related to academics, hobbies and socialisation (Tanik N., 2021) and their parents supported them by engaging them in leisure opportunities and sports activities (Ferreira & Fleith, 2012).

The parents of the gifted participants and the average students identified the same hobbies and leisure activities as indicated by their children. The parents of the gifted students confirmed that their children found time for their hobbies and leisure activities (n=3) and they were a source of relaxation for them (n=2). On the other hand, all the parents of the average students (n=3) remarked that if their children had good organisation of their time, they would have enough time for their studies, hobbies, and leisure activities. As a matter of fact, the parents of the average students (n=2) restricted the time their children dedicated to their hobbies and leisure activities so that they could focus on their studies. This was of concern given that previous research had demonstrated that students adopt positive attitudes towards school when they participated in extracurricular activities (Dotterer et al., 2007; Marsh, 1992). Other researchers had argued that leisure activities acted as buffers against stress (Coleman 1993) and had been associated with enhanced academic performance and psychological well-being (Bartko & Eccles, 2003; Trainor et al., 2009).

The perceptions of the teachers on hobbies and leisure activities for gifted students differed greatly from not finding time for hobbies and leisure activities (n=1) to practising hobbies that require commitment (n=2) and they were more inclined to playing musical instruments and voluntary activities than sports (n=1). However, all teacher participants agreed that most students, including gifted students, did not find time for hobbies and leisure activities and put them on hold, because of time constraints mainly related to private tuition. This was rather surprising since it was contrary to what the gifted student participants and their parents said *i.e.*, that they found the time to participate in sports and leisure activities. Having said that,

it needs to be pointed out that locally, there is a cultural tendency that students are enrolled to private tuition after school hours even as young as early primary school years.

The findings of the emergent sub-theme *enjoying leisure activities* were not identified in the narrative review (*Leisure activities*) for gifted students. Notwithstanding this, and although research in this area seemed limited, the findings of the narrative literature review were nonetheless relevant to this research, considering that gifted students had high self-perceptions when they participated in educational, artistic, sports and games. However, there were also antisocial behaviours associated with several leisure activities, such as playing computer games or watching television (Yüksel & Arslan, 2018).

5.4.2 Social interactions with peers

Media played an influential role in portraying gifted children as socially inept, emotionally challenged, but cognitively outstanding (Vialle, 2007). Various researchers aimed to explore the underlying reasons and attributed this to gifted children having different socio-emotional development than their peers (Freeman, 2006a; Shechtman & Silektor, 2012), encounter social difficulties (Peterson & Morris, 2010), they did not have friends and were sad and lonely (Vialle et al., 2007). According to Swiatek (2001), gifted adolescents believed that their high ability had negative effects on their social relations and developed different coping strategies including forced-choice dilemma (Gross, 1998) and balancing popularity and achievement (Francis et al., 2010). Nonetheless, this study found no evidence of gifted participants encountering difficulties in their social relations. The gifted and the average participants felt that their social relations were not affected by the track system and they had friends in other tracks. This was consistent with other studies, in which no evidence was found of gifted students being less socially competent and / or their giftedness was affecting peer relations (Hornstra et al., 2020; S. Y. Lee et al., 2012; Weyns, Colpin, et al., 2021).

These findings could have been influenced by the participants being in a track system, which was comparable to other findings from other studies carried out with ability grouping (Herrmann et al., 2016; Palacios et al., 2019). Marsh et al (2008) claimed that ability groups outlined the specific social group and nurtures or limited peer social interactions. For instance, in lower tracks friendships may be promoted with students exhibiting deviant behaviours or misconduct (Crosnoe, 2002). Although potentially this may be experienced, in

Malta the tracks are not fixed for the whole school day *i.e.*, students may be in one track for one subject and a lower track for another. This led students to interact with different peers and build different social interactions even with peers from different tracks. The findings of this study also reported that the average participants did not encounter any difficulties in their social relations and felt that their social relations were not affected by the track system and they had friends in other tracks.

Gifted participants (n=2) felt that there were occasions where other students from their class or other tracks commented on their high grades, and the competition experienced in class which led to conflict. This contrasted the findings from Smedsrud (2018) where although the participants, aged between 16 years and 19 years who were also ability-grouped for Maths, reported an overall positive school experience as the student participants in this study, they experienced competition positively and did not perceive any negative competition from their peers. Both gifted and average participants found no difficulty to make friends (n=5), bar one gifted participant, who described herself as an introvert. Interestingly, this finding fitted in with previous research on social interactions suggesting that introverts were quiet, calm, timid and withdrawn, affecting social relations (John & Srivastava, 1999). Both gifted and average student participants (n=6) felt they had a positive social context in class, and they had peers who they considered as friends in class.

All parent participants (n=6) for average and gifted students echoed the same remarks by their children - they did not feel that social relations were affected by the track system and were cognisant that their children had friends in different tracks. The parent participants (n=6) also noted that there was a positive social context in their children's class and their children had peers, whom they considered as friends. The parents of the gifted students remarked that in their daughters' respective classes, they helped each other and even went out together during weekends, although one participant remarked on the instances of competition experienced in class, which she attributed mainly between girls rather than boys.

The teacher participants held different perceptions than those of the student participants (gifted and average). This was interesting, given that they shared the same learning environment. Most of the teacher participants (n=3) remarked that social relations were affected by the track system for various reasons, namely students did not seem to mingle with students of different abilities, gifted students were described as loners, the stigma which

students with lower ability had, and the different social classes affected the social relations with gifted students. It must be pointed out that positive social relations are important in schools and play an important role in engaging and motivating students. Although none of the student participants or their parents remarked that their students mingle with peers of similar ability, this was pointed out by the teacher participants. The teachers' claim concurred with the findings of other studies (Cross & Swiatek, 2009; Wentzel, 2005; Weyns, Colpin, et al., 2021). One of the teacher participants remarked that the social relations in gifted classes ranged from finding it difficult to make friends and not helping one another, to one where they helped one another, worked together and shared notes. Three participant teachers remarked on the competition experienced in gifted classes, manifested through justification of grades, stress and bullying, competitive behaviours, and preference to work on their own. The teacher participants (n=2) also remarked that since the introduction of co-educational classes, class dynamics in gifted classes had changed because boys were less competitive than girls'. This perception contrasted earlier findings on inherent differences in competitiveness between gifted boys and girls and on whether competitiveness was context-sensitive. Results indicated that irrespective of single-sex or co-ed settings, gifted boys outperformed girls in motor and spatial tasks but girls were more competitive in verbal tasks, demonstrating that competitiveness was independent of gender but task-sensitive (Dreber et al., 2014; Gindi et al., 2018).

The findings of the emergent theme *social interactions with peers* were similar to those of the narrative review (*Social interactions with peers*). Five of the studies included in the narrative literature review concluded that gifted students were well accepted by their peers and they were as socially adjusted as their non gifted peers (Košir et al., 2016; Tereshchenko et al., 2019; Verschueren et al., 2019; Watts, 2020; Yüksel & Arslan, 2018). Although there were other papers in the narrative literature review that reported on gifted students playing down their abilities to be accepted by their peers (Brigandi et al., 2018) and trying to fit in the conventional gender interpretation (Skelton et al., 2010), these findings could not be replicated in this Maltese context.

5.5 Theme 4: Influence on the learning experience

5.5.1 Influence of family

Family support for gifted students has been given less attention by researchers than other aspects related to giftedness (Vialle, 2017). The family has an important role in the development of children and communicating culture, beliefs, values, attitudes, knowledge social and psychological influences. Therefore, school and family are crucial in the development of all students, especially gifted students (de Souza Fleith, 2016; Pfeiffer, 2013).

This study found that gifted participants (n=3) did not feel pressured by their parents to achieve good grades, and their family expectations were in line with their own, especially when it came to obtain higher grades (n=3) and prospective careers (n=2). The gifted participants paid tribute to the support being provided by their parents which ranged from emotional support (n=3), financial support to attend private tuition (n=2), and academic support (n=1). Conversely, all average participants (n=3) felt pressured from their families to get good grades and remarked that their family expectations were not in line with their own. They felt they were supported by their families and gave several examples including academic support (n=2), encouragement (n=2) and attending private lessons.

All the parents of the gifted students (n=3) confirmed the submissions made by their daughters that their expectations were in line, especially when it came to prospective career aspirations. An interesting point was made by two of the parents of the gifted students who voiced their concerns on how pressure may affect children negatively and potentially giving up on their studies and quitting. The parents of gifted students gave several examples of manifestations of family support, which matched those given by their daughters and included emotional, academic, and financial support. Interestingly, these findings fitted with previous research on families of gifted students suggesting that parents allocated more resources in favour of the gifted child to enhance their potential including financial support for sports, tuition and other leisure activities (Renati et al., 2016; Subotnik et al., 2003). As pointed out by one parent of the gifted students, she was ready to sell her house for her daughter to pursue her studies abroad.

One of the participants also remarked on the accessibility to books her daughter had since she was six months of age. Having a stimulating home environment, such as access to books

(Stoeger, Steinbach, Obergriesser, et al., 2014), and educational games and activities (Snow & Van Hemel, 2008) especially during their early years, would enhance the development of their children's abilities. Additionally, Freeman (2006b) identified the long-term effects of emotional support and access to useful educational opportunities at home to ensure success in adult life. The parents of the gifted students (n=3) agreed that their daughters were independent learners and as parents, they were not aware of what their children were doing at school but would support their daughters when necessary. Winner (1996) explained that the families of gifted students valued education, encouraged independence but monitored and supported their children. These parents facilitated and supported autonomy and independence by the way they supported their children's learning and the way they interacted with them (Olszewski-Kubilius et al., 2014; Stoeger, Steinbach, Obergriesser, et al., 2014).

The parents of the average students agreed with the submissions made by their children that their expectations were not in line with those of their children. They (n=2) also spoke about the restrictions imposed on their children in sports and leisure activities so that their studies were not affected. When it came to manifestations of family support, only one of the parents of the average participants provided academic support to her child, whereas the other parents provided emotional support or support when necessary. This could potentially be explained given that the parent who provided academic support, also worked at the school and was aware of the topics being covered by her son at school.

The teacher participants (n=3) also confirmed the submissions made by the gifted participants and their parents that their expectations were in line but remarked on the pressures they experienced by these high expectations. The teacher participants remarked on the support given by parents of gifted students who value learning and see how they can support their children better. They remarked that most gifted students had supportive parents and readily sent them to private lessons to get good grades, they discussed frequently with their children potential career prospects, and nearly all of the parents of gifted students attended Parents' Day; however, the attendance of parents decreased with lower tracks. This phenomenon was also observed by other researchers who remarked that parents of gifted students were inclined to become involved with the school activities and supported their children to participate in extra-curricular programs (Olszewski-Kubilius et al., 2014).

From the demographic details collected during the interview (**Tables 10** and **11**), the social status of the mother, family size and sibling order did not relate with student identification *i.e.*, either gifted or average student. Latest available published data by the Malta National Statistics Office indicated that over a period of 14 years, there was not a significant increase in the number of live births per household *i.e*., the number remained relatively stable. Moreover, there was not a significant difference in the household size of white and blue collared workers (National Statistics Office, 2016). Other potential factors could include a competitive education system, State schools in Malta are free and mandatory up to the age of 16 years of age, offering equal opportunities for everyone including free text books, free SEC examinations at the end of compulsory schooling, and even financial support. Therefore, gaps within the social strata were being bridged through the implementation of Government's social and education policies. Therefore, within the Maltese context, there was no evidence to replicate research findings that parents of gifted students had higher levels of education attainment.

The findings of the emergent sub-theme *influence of family* were similar to those of the narrative review (*Family relations*) that discussed the positive family environments and the supportive role of parents in the experiences of gifted students (Brigandi et al., 2018; de Souza Fleith, 2016; Lam et al., 2018; Stoeger, Steinbach, Obergriesser, et al., 2014). The support by parents of gifted students, as described in the narrative literature review, were very similar to the findings of this research where children were supported academically and non-academically (Brigandi et al., 2018). However, the findings of the narrative literature review were not in line with the findings of this research when it came to the high expectations gifted students experienced from their parents (Lam et al., 2018) and the positive influence of family cultural capital on the students' achievements (Stoeger, Steinbach, Obergriesser, et al., 2014).

5.5.2 Influence of school activities and class interventions

The gifted and average student participants (n=6) remarked on their positive school experiences and they gave common reasons which included discipline, a welcoming school, and dedicated and supportive teachers who used different teaching strategies. The gifted students also mentioned other reasons including well organised schools and good transitions. Although the study by Lam et al (2018) was carried out in primary and secondary mainstream

schools, their findings on environmental factors and school satisfaction of gifted students also suggested that 'environmental influences' can enhance school satisfaction, affecting students' experiences at school.

All the student participants (gifted and average) (n=6) felt that their learning needs were being met by their class teachers, who they felt were well prepared for the lessons and used appropriate teaching strategies. Undoubtedly, both sets of student participants provided different examples of appropriate teaching strategies they found useful, since their learning needs differed. This pointed to other studies, which have shown that when teachers were aware of the students' learning preferences, they would be able to differentiate the curriculum, thereby leading to "improved academic and attitude gains in students from a wide range to cultural groups" (Tomlinson et al., 2003, pp. 129-130). This highlights the relevance of teachers to accommodate the students' learning preferences and adjusting their teaching styles and class context to accommodate, which in turn will enhance the students' achievements. This goes without saying that gifted students are not homogenous in their learning preferences but can be quite complex (Reis & Renzulli, 2009). The gifted participants preferred additional challenging work, use of innovative teaching strategies and second explanations.

This research constantly demonstrated the preference of gifted students for challenging work which fitted in with previous research that challenging activities maintained their interests, learning pace and if they were bored, this could lead to academic failure (Scot et al., 2009). It was interesting to note that the preference of gifted students in innovative teaching strategies outlined that "challenge is not associated with complexity, but with novelty" (Gomez-Arizaga et al., 2020, p. 16). The average participants preferred PowerPoint presentations, quizzes, games, class discussions, being provided with notes and use of humour. Interestingly, the learning preferences of average students were similar to those found in previous studies for gifted students, which included more visual and kinaesthetic methods and less auditory (Dunn & Price, 1980; Samardzija & Peterson, 2015).

Previous studies have demonstrated that teachers were perceived as supportive by students when they were caring (Johnson, 2009), demonstrated fairness, used differentiated teaching and supported students emotionally (Lam et al., 2018). The gifted and average participants (n=6) felt that most teachers were supportive and understood their learning needs. Gifted

students remarked that this was exhibited by dedicated and well organised teachers when they required a second explanation which was provided online, during break time or in class, given extra work when there were students with a slower learning pace and teachers even corrected their extra work. Average students felt this was exhibited when teachers were understanding and approachable and would try various strategies to facilitate learning. In fact, two of the average participants remarked on their experiences of either lack of support from teachers when they required further explanations, or teachers not providing explanations at all.

One of the gifted participants also commented on the differential treatment, manifested by the teachers in the top-set classes and in the other classes of different abilities. Gifted students were told by their teachers that they were expected to be on their best behaviour and be of example to the school, and this statement was not made in other classes with other abilities. This finding was also identified by Guthrie (2019) who had submitted that because of their high cognitive abilities, gifted students were considered to be role models for other classrooms and their parents and teachers assume that they enjoy learning.

The perceptions of the gifted and average participants seemed to focus more on teachers' characteristics and competence. These were the two pillars of the Self-Determination Theory (SDT) (Ryan & Deci, 2001), which proposed that with good teaching characteristics, the students' needs for relatedness, competence and autonomy would be supported and all students would benefit, irrespective of abilities or social backgrounds (Stroet et al., 2015). Both the gifted and average participants mentioned relatedness most often, followed by competence support, which was referred to more by the gifted participants than the average students. This finding could also be possibly affected by the fact that all the gifted participants were girls who referred to teacher relatedness. This replicated similar results of a study by Bakx et al. (2019) where it was found that students valued good relationships with the teacher more than teacher's competence in the subject and girls referred to teacher relatedness more than boys.

Autonomy support was not mentioned by the gifted and average participants and this could be the result of a (harsh) competitive Maltese education system, which in principle does not promote autonomy. As a matter of fact, students mentioned several times that notes were

even dictated in class. This did not reflect previous research by Betts (1985) who had remarked that gifted students would benefit from being provided with choices.

Interestingly, the findings indicated that the preferred and least preferred school activities varied for gifted and average students. Whereas gifted students preferred school activities that continued to further enhance their skills, such as the school panto, sports activities and break clubs, average students preferred school outings. For the least preferred school activities, gifted and average participants agreed on lecture-type lessons and reading or writing out notes without any explanation. Gifted participants also added fieldwork and group work as least preferred, claiming it was because of issues with team dynamics. This finding fitted with previous research which referred to lecture-type lessons as the less preferred activities of gifted students and that gifted students should be provided with opportunities to work either alone, or with adults (Dunn & Price, 1980), especially when they perceived unsupportive social and learning environments (French et al., 2011).

The parents of the participating gifted and average students (n=6) also felt that their children had positive school experiences, both agreeing that this was due to the high-quality teaching and the discipline at school. Other reasons given by the parents of the gifted students included, unnecessary transitions since this was one of the very few State schools in Malta where middle and secondary schools were in one school and they never had issues with the school. Additional reasons given by the parents of the average student participants included pleased children at school and the focus of the school was on holistic development rather than the academic component. Jen (2017) had also claimed that teachers could provide appropriate teaching strategies when they understood their students holistically.

Unanimously, the parents of the gifted and average students agreed that teachers understood the learning needs of their children and were well prepared and supportive. This reflected the views of their children. They provided several examples of the support provided by different teachers to help their children understand. The parents of the gifted students also highlighted teaching strategies that their daughters found beneficial, which were in accordance with those provided by their daughters and included additional challenging work and innovative teaching strategies. The parents of the average participants (n=2) had limited information on effective teaching strategies their children found useful, except for one of the

parents, who worked at the school and remarked on the multi-sensory approach that some teachers used.

The parents of the gifted students concurred with their daughters' preferred school activities, which included the school panto and clubs during break time but mentioned projects and competitions rather than sports activities. Parents of average students agreed on school outings as their children's preferred school activities, however they also included being given merit certificates, videos, quizzes, discussions, and hands-on activities. The majority of parent participants could not identify less preferred school activities for their children bar for one parent of the average students, who identified lecture-type lessons with no student participation. This reflected what the student participants remarked.

It is important to highlight that gifted students learn when teachers accommodate their learning preferences and included more appropriate teaching methods to enhance the students' achievements (Samardzija & Peterson, 2015). Without exception, all teacher participants felt that they understood the students' learning needs through various ways. This included getting to know students to build on what they find inspiring, setting up a class environment conducive for learning and discussions, challenging them, getting to know their students' learning needs and using digital technology. Similar to these findings, Bakx et al. (2019) recent study also outlined similar points that teachers should identify the educational needs of gifted students, employ differentiated instructions, and rich learning activities to encourage higher order thinking skills. Although different gifted students may require diverse teaching strategies to cater for their needs, good relations among students, teachers and other peers help in setting up a positive learning environment where students felt safe (Seligman, 2007).

All teacher participants (n=4) agreed that the track system was beneficial for students with different abilities, and they had high expectations for gifted students. They remarked that one could speak with gifted students like adults and enough work had to be assigned so that they would not remain idle. It was interesting to note that the perceptions of teachers at the preferred school activities for gifted students was not in line with those given by the gifted students themselves. Those given by the teachers included treasure hunts, projects and competitions, quizzes, and debates, most of which had a competitive aspect, thereby confirming the teachers' perceptions on the competitiveness of gifted students.

The findings of the emergent sub-theme *influence of school activities and class interventions* were similar to those identified in the narrative review (*Teacher - student relation*) *i.e.*, when gifted students establish trusting relations with educators, this would contribute to positive perceptions (Brigandi et al., 2018). Similarly, research by Lam et al. (2018) found that gifted students described good relations with their teachers and highlighted positive teacher characteristics which they felt were of support, and which were not only related to academic success. These included teachers' ability to listen, use of appropriate strategies of support, and building strong relations with them. The findings of the emergent sub-theme i*nfluence of school activities and class interventions* were similar to those of the narrative review (*Teaching and learning experiences*) that gifted students did not find traditional teaching methods and tasks reinforcing memorisation appealing, but preferred challenging activities (Watts, 2020).

5.6 Findings of the qualitative research and the wider narrative literature review

The completion and analysis of the qualitative data collected within the Maltese setting, enabled the researcher to explore further how the results fitted with the wider literature, which had already been analysed in the narrative literature review, and which fed into the main study of this research. Although the topics identified in the narrative literature review overlapped with the main themes identified in the main study, some of the findings of the main study did not reflect the findings of studies, identified in the narrative literature review. The researcher believed that this point warranted further discussion.

5.6.1 Overlapping topics and themes

a. Gifted students have a high sense of motivation and persistence

This code emerged strongly in the main study. Without exception all gifted students were highly motivated to learn, and this was demonstrated in various ways including the diverse ways of learning they used, not giving up easily when a subject topic was perceived to be challenging, and their organised ways of preparing for exams and their extra-curricular activities. Meanwhile, average students demonstrated less motivation and perseverance especially when challenges in learning were encountered and, in the ways, applied to cope with these challenges. These findings were corroborated by the students' teachers and

parents. They were also replicated in the findings of the narrative literature review (*Teaching and learning experience*) in that gifted students had the necessary motivation, aspirations, dedication to learning and aptitudes to plan and set the goals they desire together with the self-discipline and positive attitude when faced with challenges.

b. The learning needs of gifted students are different than their non gifted peers

In the main study, teachers, parents, and the gifted students themselves concurred that they learn faster than their peers and remarked on the strategies they found beneficial for learning (reverse classroom, working extra work and past papers) which tend to demonstrate their independence, commitment, and motivation. Non gifted students preferred the teacher-centred learning. Findings of the narrative literature review also confirmed that gifted students learned at a faster rate than their peers and required challenging tasks to remain motivated and feel included in a mainstream class.

c. Gifted students prefer to work on their own

Maltese gifted students like other gifted students preferred to work alone rather than in a group, especially if this was not attractive for them *e.g.*, they would not be able to choose their peers and their peers did not learn at their rate. This was also identified in the narrative literature review findings.

d. Gifted students encounter no difficulties in social interactions and have peers they consider as friends

Maltese gifted, and average students found no difficulties with social relations at school and did not feel that social relations were affected by the track system. Their parents also agreed that social relations were not affected by the track system. Potentially, this was due to the possibility for Maltese students to be in different tracks for the different core subjects, and this helped to build different relationships. Gifted and average students felt they had a positive social context in class and had peers they considered as friends. These findings are similar to those in the narrative literature review, where most of the studies found that gifted students were well accepted by their peers and were as socially adjusted as their non gifted peers.

e. Gifted students had positive family environments and supportive parents

Both the main study and the narrative literature review reported that gifted students had supportive parents who were responsive to their needs and supported them academically

and in non-academic situations. This helped the gifted students set achievable goals, succeed, and become autonomous learners. In the main study, this was also confirmed by their parents and teachers. The parents reported that their gifted daughters were independent learners, and they were not aware what their daughters were doing at school, but they supported them, where necessary. The average students also had supportive parents (academics and encouragement) but they felt pressured by their parents in getting good marks and restricting their time for hobbies and leisure to focus more on their studies. Findings from the narrative literature review reported that gifted students had good rapport with their parents and low levels of conflicts on academic matters.

f. Gifted students had overall positive experiences especially when their learning needs were met

Maltese gifted students remarked on their positive school experiences and gave common reasons, including a welcoming school, discipline, and dedicated and supportive teachers. They felt their learning needs were met by their teachers who understood their learning needs. This was also confirmed by the Maltese average students and the parents of the gifted and average students. The Maltese teacher participants felt they understood the students' learning needs in different ways such as getting to know students, adapting class set up, and the use of digital technology. The Maltese gifted students were not homogenous in their learning preferences, but included challenging work, use of innovative teaching strategies, and school activities that enhanced their skills further. Their least preferred activities included lecture-type lessons and writing of notes without any explanations. This was similar to the findings of the narrative literature review which confirmed that gifted students preferred appropriate and engaging instructional methods such as, inquiry-based learning, discussions, creating and building things rather than traditional teaching methods, and tasks reinforcing memorisation.

g. Gifted students felt they had supportive teachers with whom they had good relations

Maltese gifted students felt their teachers were well-prepared and used appropriate teaching strategies. They remarked this was exhibited by dedicated and well organised teachers and were ready to provide extra work and additional explanations when necessary. Maltese average students were also in agreement that their teachers were understanding and

approachable and would try various strategies to facilitate learning. The parents of the Maltese gifted, and average students agreed that their children's teachers were supportive and understood their learning needs. This was similar to the findings of the narrative literature review, where most gifted students described their teachers as supportive (academically and emotionally), had good trusting relations with them, had high levels of commitment, and encouraged and acknowledged their efforts. Gifted students highlighted positive teacher characteristics that they felt were of support. This included being sensitive to their needs, ability to listen, encouragement and use of appropriate strategies to support to nurture their talents.

h. Teachers expect gifted students to know certain things already and can make it on their own

This was reported in the main study by the teachers themselves and in the narrative literature review mainly due to their high expectations for these students. The narrative literature findings reported that this caused frustrations in gifted students, which were not reported in the main study. A possible explanation could be that the track system may be counteracting for this by students being grouped in the different ability groups.

5.6.2 Divergences in topics and themes

i. Lack of challenging activities in mainstream schools led gifted students feel that schools were limiting their progress

Findings in the narrative literature review claimed that gifted students expressed negative views on mainstream classes because of a lack of appropriate challenging and engaging curriculum that limited their progress and had to find ways of occupying themselves. These findings were not replicated in the main study, however the teachers spoke of the challenges they encountered for teaching gifted students mainly the preparation time and additional research.

ii. Teachers hold stereotypical views of gifted students

This was noted in the findings of the narrative literature review but not in the main study probably because in Malta gender equity in schools is promoted.

iii. *Tracks might contribute to social inequality*

In the main study, all student participants (gifted and average students) and their parents felt that the track system in schools was well organised and met the academic, social, and emotional needs of their children. This finding was not identified in the narrative literature review, where it was reported that tracks may contribute to social inequality. However, Maltese students can be in different tracks for the different core subjects and receive the necessary support. They are in mixed ability classes and following the same core curriculum for the other subjects.

iv. Gifted students play down their abilities to be accepted by their peers

This was not observed in the local context, however the perceptions of Maltese teachers differed from those of the students (gifted and average students) and their parents. Maltese teachers remarked that social relations were affected by the track system and gifted students were loners and the different social classes affected social relations in addition to competition, stress, and bullying. Findings of some of the eligible papers of the narrative literature review reported gifted students playing down their abilities to be accepted by their peers and fitting in the conventional gender interpretation. They felt they were more socially accepted in classes with peers of similar cognitive ability, shared goals, and similar interests. Social relations were not always reported positively by gifted students, especially when it came to jealousy of their abilities, competition, bullying and social segregation.

v. Gifted students experience high expectations from their parents

The narrative literature review reported that gifted students experienced high expectations from their parents. Maltese gifted students did not feel pressured by their parents, and their family expectations were in line with their own, especially when it came to obtain good grades, selecting option choices and prospective careers. This was also confirmed by their parents who remarked how pressure may affect their children negatively including giving up or quitting their studies. Maltese teachers confirmed that parents of gifted students had expectations in line with their children's but contrastingly remarked on pressures experienced by their children, due to high expectations. Maltese average students felt pressured by their families and their expectations were not in line with their own. Their parents confirmed this and even imposed restrictions on their hobbies and leisure activities.

vi. Positive influence of family cultural capital on the students' achievements

Findings of the narrative literature review revealed that aspects of family cultural capital influenced gifted students' achievements. This research finding was not replicated in the Maltese context such that the parents of gifted students did not have higher levels of educational attainments. This could be explained by the fact that State schools in Malta are free and mandatory up to the age of 16 years, offering equal opportunities for everyone. Therefore, gaps within the social strata were being bridged and addressed.

vii. Mentors offer academic and emotional support to gifted students

Maltese gifted students made no reference to mentors because mentors have never been introduced in Maltese schools. There was unanimity between the Maltese gifted students that they had no role models that perhaps would influence their motivation. The findings of the narrative literature review highlighted that gifted students felt that mentors contributed positively when it came to time management, academic and emotional support and helped them develop appropriate skills and locate required resources. Mentors can enhance the gifted student's interest area and provided support to achieve their goals.

viii. Waiting time by gifted students utilised differently

Maltese gifted students were fast learners and finished their work early in class. They utilised waiting time in class either by reading, completing extra work assigned by the teacher, or by helping other students complete their work. The narrative literature review findings also highlighted that gifted students finished their work early and they had to find ways of occupying themselves which, at times, were misinterpreted by their teachers as bad behaviour. Peer tutoring was seen in a negative light because it contributed to labelling and resentment towards gifted student. This was not replicated in the Maltese context because the track system comprised of a balanced distribution of abilities in the same class, thereby avoiding dominance by either end of the spectrum.

ix. Gifted students set high career aspirations

It was interesting to note that Maltese gifted participants chose sciences as their option subjects, whereas average peers chose different subjects from the academic and vocational paths. This was confirmed by their parents and teachers. Justifications for the choice of subjects was somewhat similar to both the gifted and average participants, *i.e.*, directly linked

to their career aspirations. Teachers remarked that gifted students focused on their future and what they wanted to become. This was not found in the narrative literature review.

x. Gifted students find time for a variety of hobbies and leisure activities

Gifted Maltese students found the necessary time for hobbies and leisure activities, whereas average peers did not find the time, whilst their parents restricted the allocated time to focus more on their studies. Teachers' perceptions were not in line with this finding because they thought that gifted students did not find time for hobbies and leisure because of time constraints mainly private tuition after school hours. This was not identified in the narrative literature review.

5.7 Limitations of the present study

The sample of participants in this research was small, which may have impacted on the robustness of the results, since it was not representative of the respective populations. The small sample size, although acceptable for in-depth interview studies, limited the variety of stories and experiences of gifted adolescents. Additionally, the selection of participants for this study relied heavily on academic grades. Further diagnostic identifiers would have strengthened the validity of the conclusions. However, given that there was no formal identification system for gifted students in Malta, this approach could not be adopted for this study.

The student participants comprised Year 10 students only, from one State Secondary School. This affected the generalisability of the findings in Malta, to other non-state settings, where the track system is not implemented. Moreover, the research had not considered perceptions of students at different educational levels. From an international perspective, the reliance on just academic grades was also a limitation, given that what defined a gifted student in one country may not be representative of giftedness in another country. For instance, the Maltese system does not consider talents (say in sports and arts) in the placement of students in the track system.

The learning preferences of the student participants were complex and varied from one individual to another. There was a gender imbalance especially for the gifted student participants and therefore there were limitations to the generalisability of the results. The

parent participants in this study were all mothers; additional experiences of the fathers could have provided different perspectives of gifted and average ability children. Moreover, the teacher participants were selected by the student participants, as teachers who they felt understood them. The voices of other teachers had not been considered and therefore, the findings cannot be generalised.

Due to Covid-19 restrictions, all interviews were carried out online and although the interviewees were encouraged not to remain in the same room, all of them opted to stay in the same room. Although the researcher could not detect any hesitations to reply to her questions (because the parent and student were in the same room), a certain degree of influence cannot be excluded.

Although there are several limitations, this research was the first of its kind in Malta and was a transparent account of the educational experiences of Maltese gifted students, as compared to their average peers, and as perceived through the eyes of their parents and teachers.

5.8 Future recommendations

5.8.1 Recommendations for policy makers

In countries like Malta where, although the Policy for Inclusive Education in Schools: Route to Quality Inclusion (Ministry for Education and Employment, 2019a) refers to students of different abilities, there is no formal training for preparing teachers for gifted students and listening to student's voices can be a meaningful and justifiable way to inform and bring about change in school practices.

It is therefore recommended that MEYR:

- engages with psychologists, counsellors and guidance personnel working within schools to determine how they can assume a more prominent role in the education of school communities and to promote talent development practices that can support students, teachers, and parents;

- launches national educational campaigns to encourage parents' engagement in schools so that they can work collaboratively with teachers, their children and other support practitioners such as career advisors and guidance teachers;
- implements a national action plan to introduce mentors in schools. Mentors can work on the gifted student's interest areas and provide a supportive relationship to gifted students by presenting fundamental milestones to achieve their goals;
- hears students' voices when planning their learning and school experiences. This research reaffirmed the valid contributions which students can make to educational practice;
- promotes teacher training and continuous professional development. This should focus on preferred teacher characteristics to support gifted and average students and use of appropriate teaching strategies for the different student abilities to promote learning and autonomy in the classroom. Positive student-teacher relationships were shown to influence students' learning experiences and overall satisfaction. Teacher training should address understanding students with their diverse abilities and utilisation of various support mechanisms because this research found that this has a significant influence on students' learning experiences;
- in the spirit of the Inclusion Policy, policy makers should continue to strive on the rights-based approach, as stipulated in the Policy, and adopt an intersectionality approach so that all learners, including gifted learners, and those coming from minority groups, having individual needs *etc*., benefit from effective provision that supports their learning, development and attainment;
- enables and promotes a migration from a traditional classroom settings to constructivist settings (McLeod, 2019), whereby a student-centred approach is implemented to encourage interactive learning and teacher-student-teacher interaction; and
- considers the organisation of extra-curricular activities on school premises to mitigate the lack of opportunities, which average students have for hobbies. Planned and organised on a national level by the education authorities, may encourage parents to consent to participation.

5.8.2 Recommendations for educators

This research has contributed to help target certain practices in local State schools that would be beneficial for both gifted and average students and promote the implementation of the Inclusion Policy *vis-à-vis* gifted and average students.

Educators are recommended to:

- encourage positive teacher - student relationships, which was shown to influence the students' learning experiences and the overall satisfaction at school;
- be instrumental and strengthen communication among students, parents, and teachers to help the students reach their goals through guidance teachers;
- create inclusive school environments that promote, develop, and foster all learners' emergent abilities and provide the appropriate pedagogy and class environment for their abilities to be discovered, developed, and prosper;
- be acquainted with gifted education and its links with inclusive education and general education to bring about attitudinal changes, beliefs, perceptions, and aptitudes towards the diverse students in classrooms, particularly gifted students;
- move away from traditional teaching methods and become a "co-constructor of knowledge" (Murphy, 2020, p. 202), where the environment, family and student are all involved in the learning process;
- attend continuous professional development courses, workshops, and conferences, locally and abroad to share and explore knowledge and experiences in terms of pedagogy and practice, of supporting gifted students in mainstream classes; and
- apply teaching strategies that promote relatedness, competence, and autonomy in classrooms will benefit gifted and average students alike. The preferred teacher characteristics can shed light on what is necessary to support gifted and average students alike, which could be used for teacher training and professional development courses.

5.8.3 Recommendations for researchers

The scope of this study was limited to the educational experiences, since it explored their preferred ways of learning, their social and family relationships, personal characteristics, and future aspirations. Further research should consider detailed investigation of learning styles, sources of intrinsic and extrinsic motivation, academic self-concept, and other variables.

It is recommended that:

- future studies are carried out at different educational levels, considering a more objective method for selection purposes, such as standardised pretesting of students;
- identification of gifted and talented students is clarified and defined because this may lead to different students with different abilities being identified and studied;
- future studies are carried out to include other populations of gifted learners, involving twice exceptional learners, gifted underachievers, and gifted students from different cultural backgrounds;
- future studies also consider gender balance in the participants and include students from non-state schools; and
- educational research on inclusive practices supports the needs of learners, especially gifted learners and, in addition to the adults' perceptions, it includes the learner's own perception of ability and learning to provide insight on what assists them to perform, learn and attain in the classroom.

Three gifted student participants are not a reflection of the experiences of all Maltese gifted students, and this was not the aim of this study, but rather it was important to grasp the essence of the students' experiences and give them a voice.

Therefore:

- future studies should also include more voices to shed light on different experiences of students, including lower ability students, other age groups of gifted students and other populations of gifted learners, which were not considered in this research; and
- more homogenous, gender balanced participation should be considered.

These recommendations should bridge the knowledge gap which exists between the upper track and the remaining tracks in the Maltese setting and which have not been considered in this study. This would ensure that the design of interventions and available resources are used effectively to address the needs of all students within the Maltese education system.

5.9 Conclusion

The purpose of this study was to explore how gifted students experience their daily lives in regular schools as learners, focusing on the impact of the diverse teaching experiences in regular classrooms, as gifted learners.

Throughout this study, it was possible to observe that if students are understood, nurtured and their needs catered for, all students, including gifted students, may be given opportunities to feel satisfied and find school meaningful to spark the interest to learn. Listening to student's voices is important to help evaluate and plan school practices.

This research identified eight similar and eight different characteristics, and two knowledge gaps between the main study and the narrative literature review.

Chapter 6 – Conclusions

This research explored the learning experiences of Maltese students identified as gifted in top-set classes and those in average ability classes. A systematic narrative literature review drew from the wider literature and underpinned a qualitative study, exploring students' experiences from the perspectives of their teachers and parents.

The researcher wanted to listen to the educational experiences of Maltese gifted students as compared to their average peers, and as perceived by their parents and teachers. She wanted a better understanding of the social and educational experiences of gifted children in the upper tracks of the Maltese educational system. To achieve this, a voice was given to the gifted and average students, their parents, and teachers to explore their perceptions and to capture their feelings and emotions as they work towards their goals. In so doing, the researcher enhanced her understanding of the gathered data because of the details acquired on the personal and social context. With particular interest in the events happening in schools and families, the interviews with the participants provided rich descriptions of these events which also enabled the researcher to relate these events. To suit the participants' preferences and respect their choices, all information letters and consent forms were prepared in Maltese and English. The participants were asked to select their preferred language for the interview. To ensure faithfulness to the data collected, transcriptions were prepared in Maltese on Microsoft Word. The selected quotes were translated to English during the writing of Chapter 4. The researcher was very cautious to remain faithful to the meaning that the participants wanted to communicate.

This research had the potential to explore the experiences of Maltese gifted and average students in a way that will inform local policy makers, educators and researchers to help them understand strengths and weaknesses of current educational models and take any necessary actions to initiate any changes on the way education is delivered, and other educational decisions on challenges encountered by gifted students in mainstream classes.

6.1 Contribution to knowledge

By researching and comparing the learning experiences of gifted students with those of average ability students within the Maltese track system, the researcher gained knowledge on:

- the learning experiences of gifted and average students in the Maltese setting. This may help educators to adapt school and class environments to engage all students and enhance their potentiality for development and learning; and
- the coping strategies of gifted students, which were driven by their motivation for learning. It has been revealed that average learners needed support to develop their resilience skills and persevere when learning was deemed challenging. Guidance teachers can be of support in this regard and potentially adopt a whole class approach to promote learning resiliency.

This research provided policy makers, educators, and researchers a better understanding of the learning experiences of gifted and average students in State schools. The interrelationships and personal experiences of teachers, students and their parents were revealed, providing a rich description that would have otherwise not be found in school assessments and other school data. It is by virtue of the revealed experiences that knowledge has been gained on the learning experiences, as reflected in the themes reported in this research, providing an opportunity to the relevant stakeholders to plan, develop and implement strategies aimed to enhance the learning experiences of all students.

This research determined that the learning experiences of students, from their perspectives were multifaceted with positive and negative experiences. The learning experiences of the Maltese gifted students had similarities with those of the average students which included supportive parents. Moreover, they found no difficulties to interact socially at school and did not feel that social relations were affected by the track system. They had general positive experiences at school, especially when their learning needs were met, and both gifted and average students felt they had supportive teachers with whom they had good relations. Differences which were highlighted included gifted students being motivated and persevered more than average students, faster learners and found their own strategies, which were beneficial for learning, whereas those for average learners were more teacher centred.

Average students felt pressured by their families, whose expectations were not in line with their own.

These similarities and differences arose from an inadequate fit between the students' abilities and the educational opportunities provided in class. Therefore, creating awareness and addressing these issues in school will have an impact, not only on gifted students, but on all students. This research can serve to bridge the gap towards understanding the experiences of gifted and average students in Maltese schools. This research demonstrated that the needs of gifted students are generally being met by the track system if there is challenging work and innovative teaching strategies. However, average students needed further support, especially when it came to class interventions and avoidance of traditional methods to help them remain engaged.

It is the researcher's belief that educators have the power to collectively address any negative aspects of the learning experiences of gifted and average learners. The outcomes of this research showed that gifted students, similar to average ability students, benefited from teaching strategies supporting their needs. Applying teaching strategies that promoted relatedness, competence, and autonomy in classrooms would benefit gifted and average students, alike. The preferred teacher characteristics can shed light on what is necessary to support both gifted and average students, which could be used for teacher training and professional development courses.

From the researcher's perspective, equity demands that all students, irrespective of their abilities, are provided with appropriate educational opportunities to develop their full potential. Rather than simply carrying out research and collecting data on their needs, the researcher believes that educators need to keep abreast of findings from this research and similar studies to develop curricula and use appropriate teaching strategies that address the needs of all the learners in classrooms. Such research studies highlight weaknesses in current educational models and through children's voices, help to design systems appropriate for their needs.

The main study addressed the knowledge gap in career choices and leisure activities for gifted students, which were identified by the systematic literature review. Gifted students selected subjects from the academic pathway, whereas average students chose subjects from the

academic and vocational paths. The gifted student had already decided on their career aspirations and the jobs they wanted to pursue, whereas the average students were still unsure. This finding is critical information to career advisors because it has transpired that average students required additional support in the choice of option subjects and in the identification of prospective career paths. Whilst this was not the case for gifted students, the latter's early identification of a career path may limit their exposure to career paths or opportunities, which may arise. This means that career advisors need to keep in mind the multi-potentiality of gifted students and guide them accordingly to the wider selection of option subjects and career paths.

Additionally, gifted students had diverse hobbies and leisure activities, including sports and playing musical instruments. Moreover, they found time for these activities and hobbies. The average participants also had a variety of leisure activities and hobbies, but they did not find the necessary time during the week. Moreover, the parents of the average students restricted the allocated time during which, their children could attend to their hobbies and leisure activities, so that they could instead focus on their studies. The researcher considered this as a clear signal that average students may be experiencing far more pressure than their gifted peers who enjoy better wellbeing because of the time allocated to leisure activities. Guidance teachers may consider and address this matter say, by organising study skills and time organisation programmes.

The researcher has not come across studies involving these four groups of participants (gifted students, average students, parents, and teachers). Identified research included either individual groups (K.H. Guthrie, 2019; Laine et al., 2016; Peebles et al., 2023; Watts, 2020), perceptions of parents and teachers of gifted students (Galloway & Porath, 1997; Hosseinkhanzadeh et al., 2013), perceptions of gifted students and their teachers (Yildirim & Akcayoglu, 2019), perceptions of gifted students and their parents (Ersoy et al., 2019; Olszewski-Kubilius et al., 2014), or gifted and average students (Bakx et al., 2019; Bergold, Wirthwein, et al., 2020a; Yang et al., 2014). Several other papers reported on gifted students, their parents and teacher (Bicknell & Riley, 2013; Brigandi et al., 2018).

Based on the researcher's interpretation and findings, this study highlighted the pivotal role of policymakers to provide the necessary tools and resources to instigate and motivate change and for educators to create welcoming schools, develop trusting relationships, and

employ appropriate pedagogies to impact positively on the students' learning experience. Moreover, families also have a critical role to ensure parental engagement with the school and to support the students in their learning journey.

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Appendices

Appendix 1 – Databases' search strategies

CINAHL via EBSCO

EBSCOhost

Monday, February 15, 2021 2:16:11 AM

#	Query	Limiters/Expanders	Last Run Via	Results
S5	S1 AND S2 AND S3 AND S4	Limiters - Publication Date: 20100101-20211231 Expanders - Apply equivalent subjects Narrow by Language: - english Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - British Education Index;Child Development & Adolescent Studies;CINAHL;Education Abstracts (H.W. Wilson);Educational Administration Abstracts;ERIC	1,612
S4	"Learn* experienc*" or "Lived experienc*" or "Abilit* group*" or "Social relation*" or Motivat* or "Future aspiration*" or "Self perception" or "career choice*" or "choice* of subjects" or "self-concept" or "self concept" or "self esteem" or "self-esteem" or experienc* or stress or achiev* or "social-emotion*" or "social emotion*"	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - British Education Index;Child Development & Adolescent Studies;CINAHL;Education Abstracts (H.W. Wilson);Educational Administration Abstracts;ERIC	1,981,380
S3	"Non-gift*" or "Non gift*" or Nongift* or Peer*	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - British Education Index;Child Development & Adolescent Studies;CINAHL;Education Abstracts (H.W. Wilson);Educational Administration Abstracts;ERIC	202,085
S2	Intervene* or Differentiat* or "Learning preferenc*" or "Differentiat* curriculum"	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search	1,915,685

	or “Differentiat* instruct*” or Instruct* or Accelerate* or “Higher order” or Pace or Personalis* or “learning need*” or Class* or Classroom* or Schoolroom* or “Learn* style” or Enrich* or “Instruct* strateg*”		Database - British Education Index;Child Development & Adolescent Studies;CINAHL;Education Abstracts (H.W. Wilson);Educational Administration Abstracts;ERIC	
S1	Gift* or Talent*or “High abilit*” or “High-abilit*” or able or intelligen* or “High aptitude” or “High achiev*”or Exception* or Intellect* or Clever or “Academic* gift*” or “Intellect* gift*”	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	Interface - EBSCOhost Research Databases Search Screen - Advanced Search Database - British Education Index;Child Development & Adolescent Studies;CINAHL;Education Abstracts (H.W. Wilson);Educational Administration Abstracts;ERIC	518,329

(gift* OR talent*or "High abilit*" OR "High-abilit*" OR able OR intelligen* OR " High aptitude" OR "High achiev*" OR exception* OR intellect* OR clever OR " Academic* gift*" OR "Intellect* gift*") AND (intervene* OR differentiat* OR "Lea rning preferenc*" OR "Differentiat* curriculum" OR "Differentiat* instruct*" OR inst ruct* OR accelerate* OR "Higher order" OR pace OR personalis* OR "learning need*" OR class* OR classroom* OR schoolroom* OR "Learn* style" OR enric h* OR "Instruct* strateg*") AND ("Non-gift*" OR "Non gift*" OR nongift* OR pe er*) AND ("Learn* experienc*" OR "Lived experienc*" OR "Abilit* group*" OR " Social relation*" OR motivat* OR "Future aspiration*" OR "Self perception" OR " career choice*" OR "choice* of subjects" OR "self-concept" OR "self concept" O R "self esteem" OR "self-esteem" OR experienc* OR stress OR achiev* OR "s ocial-emotion*" OR "social emotion*") AND (LIMIT-TO (PUBYEAR , 2021) O R LIMIT-TO (PUBYEAR , 2020) OR LIMIT-TO (PUBYEAR , 2019) OR LIMIT- TO (PUBYEAR , 2018) OR LIMIT-TO (PUBYEAR , 2017) OR LIMIT-TO (PUB YEAR , 2016) OR LIMIT-TO (PUBYEAR , 2015) OR LIMIT-TO (PUBYEAR , 2 014) OR LIMIT-TO (PUBYEAR , 2013) OR LIMIT-TO (PUBYEAR , 2012) O R LIMIT-TO (PUBYEAR , 2011) OR LIMIT-TO (PUBYEAR , 2010)) AND (EX CLUDE (SUBJAREA , "MEDI") OR EXCLUDE (SUBJAREA , "BUSI") OR EXC LUDE (SUBJAREA , "COMP") OR EXCLUDE (SUBJAREA , "ECON") OR EX CLUDE (SUBJAREA , "ENGI") OR EXCLUDE (SUBJAREA , "MATH") OR EX CLUDE (SUBJAREA , "AGRI") OR EXCLUDE (SUBJAREA , "NURS") OR EX CLUDE (SUBJAREA , "ENER") OR EXCLUDE (SUBJAREA , "PHYS") OR EX CLUDE (SUBJAREA , "PHAR") OR EXCLUDE (SUBJAREA , "IMMU") OR EX CLUDE (SUBJAREA , "CENG") OR EXCLUDE (SUBJAREA , "EART") OR EX CLUDE (SUBJAREA , "DENT") OR EXCLUDE (SUBJAREA , "MATE") OR EX CLUDE (SUBJAREA , "VETE") OR EXCLUDE (SUBJAREA , "Undefined")) A ND (LIMIT-TO (LANGUAGE , "English")) AND (LIMIT-TO (SRCTYPE , "j"))

Database: APA PsycInfo Search Strategy

<1806 to February Week 1 2021>

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1 exp Gifted/ or Gift*.mp. or exp Ability/ (170473)
2 exp Achievement/ or exp Ability/ or exp Gifted/ or exp Academic Achievement/ or Talent*.mp. (255890)
3 exp Gifted/ or exp Academic Overachievement/ or exp Cognitive Ability/ or able.mp. or exp Academic Achievement/ (328951)
4 exp Intelligence/ or intelligen*.mp. or exp Cognitive Ability/ (277806)
5 exp Cognitive Ability/ or exp Academic Achievement/ or exp Academic Aptitude/ or exp Ability/ or High aptitude.mp. or exp Gifted/ (335043)
6 exp Academic Achievement/ or Exception*.mp. (116891)
7 exp Cognitive Ability/ or exp Intelligence/ or exp Gifted/ or Intellect*.mp. (259190)
8 exp Intelligence/ or exp Cognitive Ability/ or Clever.mp. (169235)
9 exp Academic Achievement/ or exp Gifted/ or exp Intelligence/ or exp Ability/ or Academic* gift*.mp. (257374)
10 exp Gifted/ or exp Intelligence/ or Intellect* gift*.mp. (40199)
11 1 or 2 or 3 or 4 or 5 or 6 or 7 or 8 or 9 or 10 (690918)
12 exp Intervention/ or Intervene*.mp. (128846)
13 exp Teaching/ or Instruct*.mp. (236578)
14 Accelerate*.mp. (15617)
15 exp Cognitive Processes/ or exp Cognitive Ability/ or exp Thinking/ or Higher order.mp. (861876)
16 exp Learning/ or Pace.mp. (289988)
17 exp Education/ or Personalis*.mp. (456056)
18 exp Learning/ or learning need*.mp. (283992)
19 Class*.mp. (446586)
20 Classroom*.mp. or exp Classroom Environment/ (105061)
21 exp Classroom Environment/ or exp Classrooms/ or Schoolroom*.mp. (28328)
22 exp Learning Strategies/ or exp Learning/ or exp Cognitive Style/ or Learn* style.mp. (316396)
23 exp Teaching/ or Enrich*.mp. (154657)
24 12 or 13 or 14 or 15 or 16 or 17 or 18 or 19 or 20 or 21 or 22 or 23 (1822968)
25 Non-gift*.mp. (241)
26 Non gift*.mp. (241)
27 Nongift*.mp. (339)
28 Peer*.mp. or exp Peer Relations/ (123733)
29 25 or 26 or 27 or 28 (124161)
30 exp Interpersonal Relationships/ or exp Social Interaction/ or Social relation*.mp. (714324)
31 exp Motivation/ or exp Intrinsic Motivation/ or Motivat*.mp. (284503)
32 exp Academic Achievement/ or exp Aspirations/ or exp Occupational Aspirations/ or Future aspiration*.mp. (88369)
33 Self perception.mp. or exp Self-Perception/ (70714)
34 exp Occupational Interests/ or exp Occupational Choice/ or career choice*.mp. (15225)
35 exp Secondary Education/ or exp Academic Specialization/ or choice* of subjects.mp. (10116)
36 self-concept.mp. or exp Self-Concept/ (107409)
37 self concept.mp. or exp Self-Concept/ (107409)
38 self esteem.mp. or exp Self-Esteem/ (55613)
39 self-esteem.mp. or exp Self-Esteem/ (55613)
40 experienc*.mp. or exp Life Experiences/ (766749)
41 exp Academic Stress/ or stress.mp. or exp Stress/ (297861)
42 exp Academic Achievement/ or achiev*.mp. (299966)
43 exp Social Interaction/ or exp Emotions/ or exp Social Cognition/ or social-emotion*.mp. or exp Social Perception/ (1080470)
44 exp Social Interaction/ or exp Emotions/ or exp Social Cognition/ or social emotion*.mp. or exp Social Perception/ (1080470)
45 30 or 31 or 32 or 33 or 34 or 35 or 36 or 37 or 38 or 39 or 40 or 41 or 42 or 43 or 44 (2168880)
46 11 and 24 and 29 and 45 (11875)
47 limit 46 to (peer reviewed journal and english language and (180 school age <age 6 to 12 yrs> or 200 adolescence <age 13 to 17 yrs>) and "0110 peer-reviewed journal" and human and yr="2010 - 2021") (1951)

Database: Ovid MEDLINE(R) Search Strategy:

<1946 to February Week 1, 2021>

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1 exp Humans/ or Gift*.mp. (19928650)
2 Adolescent/ or exp Humans/ or Talent*.mp. (19931291)
3 High abilit*.mp. (1306)
4 exp Humans/ or able.mp. (20196857)
5 exp Intelligence Tests/ or exp Adolescent/ or exp Humans/ or exp Child/ or exp Intelligence/ or intelligen*.mp. (19976053)
6 exp Intelligence Tests/ or exp Adolescent/ or exp Humans/ or exp Child/ or exp Intelligence/ or intelligen*.mp. (19976053)
7 exp Humans/ or exp Adolescent/ or High aptitude.mp. (19929457)
8 High achiev*.mp. (582)
9 exp Humans/ or Exception*.mp. (20000374)
10 exp Adolescent/ or exp Humans/ or Intellect*.mp. or exp Intelligence/ (19950804)
11 exp Humans/ or Clever.mp. (19926550)
12 exp Humans/ or Academic* gift*.mp. (19926115)
13 Intellect* gift*.mp. (106)
14 1 or 2 or 3 or 4 or 5 or 6 or 7 or 8 or 9 or 10 or 11 or 12 or 13 (20332927)
15 Intervene*.mp. (15184)
16 Differentiat*.mp. (885587)
17 Instruct*.mp. (117846)
18 Accelerate*.mp. (197898)
19 Higher order.mp. (29912)
20 pace.mp. (21558)
21 Personalis*.mp. (7637)
22 learning need*.mp. (2313)
23 Class*.mp. (2112141)
24 exp Curriculum/ or exp Adolescent/ or Classroom*.mp. or exp Students/ (2330668)
25 Schoolroom*.mp. (45)
26 exp Learning/ or Learn* style.mp. (412195)
27 Enrich*.mp. (264092)
28 15 or 16 or 17 or 18 or 19 or 20 or 21 or 22 or 23 or 24 or 25 or 26 or 27 (5775956)
29 Non-gift*.mp. (22)
30 Non gift*.mp. (22)
31 Nongift*.mp. (14)
32 Peer*.mp. or exp Peer Group/ (124795)
33 29 or 30 or 31 or 32 (124821)
34 Abilit* group*.mp. (231)
35 exp Interpersonal Relations/ or Social relation*.mp. (349504)
36 exp Adolescent/ or Motivat*.mp. (2308624)
37 Future aspiration*.mp. or exp Students/ (147306)
38 Self perception.mp. or exp Self Concept/ (119659)
39 exp Career Choice/ or career choice*.mp. (25585)
40 choice* of subjects.mp. (231)
41 self-concept.mp. or Self Concept/ (61166)
42 self esteem.mp. or Self Concept/ (70555)
43 self-esteem.mp. or Self Concept/ (70555)
44 experienc*.mp. or exp Learning/ (1622058)
45 stress.mp. (1024240)
46 exp Students/ or exp Achievement/ or achiev*.mp. (1308126)
47 social-emotion*.mp. or exp Social Behavior/ (279454)
48 34 or 35 or 36 or 37 or 38 or 39 or 40 or 41 or 42 or 43 or 44 or 45 or 46 or 47 (5982269)
49 14 and 28 and 33 and 48 (39531)
50 limit 49 to (english language and "review articles" and yr="2010 - 2021" and ("child (6 to 12 years)" or "adolescent (13 to 18 years)") and english) (1450)

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Web of Science
15th January 2021

Gift* or Talent*or "High abilit*" or "High-abilit*" or able or intelligen* or "High aptitude" or "High achiev*"or Exception* or Intellect* or Clever or "Academic* gift*" or "Intellect* gift*" (Topic) and **Intervene* or Differentiat* or "Learning preferenc*" or "Differentiat* curriculum" or "Differentiat* instruct*" or Instruct* or Accelerate* or "Higher order" or Pace or Personalis* or "learning need*" or Class* or Classroom* or Schoolroom* or "Learn* style" or Enrich* or "Instruct* strateg*"** (Topic) and **"Non-gift*" or "Non gift*" or Nongift* or Peer*** (Topic) and **"Learn* experienc*" or "Lived experienc*" or "Abilit* group*" or "Social relation*" or Motivat* or "Future aspiration*" or "Self perception" or "career choice*" or "choice* of subjects" or "self-concept" or "self concept" or "self esteem" or "self-esteem" or experienc* or stress or achiev* or "social-emotion*" or "social emotion*"** (Topic) and **2010** or **2011** or **2012** or **2013** or **2014** or **2015** or **2016** or **2017** or **2 018** or **2019** or **2020** or **2021** (Publication Years) and **English** (Languages)

Appendix 2 – Justification for excluded papers

Title of Paper	Justification for exclusion
Family environment and social dev in G&T	Does not focus on learning experiences
Gifted but equal? Parents perspectives on sibling relationships in families with gifted and non gifted children	Study is not explicitly on G&T
"Nothing is ever easy": Parent perceptions of intensity in their gifted adolescent children	Does not focus on learning experiences.
Parenting styles and adjustment in gifted children	Study is not explicitly on G&T (focuses on parenting styles)
Secure attachment and high IQ: Are gifted children better adjusted	Does not focus on learning experiences.
Supporting giftedness in families: a resources perspective	Study is not explicitly on G&T (focuses on parental support)
The gifted child as an equal partner or minority in the sibling relationship: the parents perspective	Study is not explicitly on G&T
A comparison of gifted and non gifted students self-regulation skills for science learning	Does not focus on learning experiences
Achievement goals, academic self-concept and school grades in mathematics: longitudinal reciprocal relations in above average ability secondary school students	Participants in a selective setting
Adolescents prosocial behaviour predicts good grades beyond intelligence and personality traits	Does not focus on learning experiences
Are motivational benefits of adequately challenging schoolwork related to students need for cognition, cognitive ability or both?	Study is not explicitly on G&T
Creative and Problem solving thinking of G&T young children observed through classroom dialogues	Age below 5 years of age
Effects of problem – example and example - problem pairs on gifted and non gifted primary school students' learning	Does not focus on learning experiences – this focuses only on example based learning
Gifted students implicit beliefs about intelligence and giftedness	Does not focus on learning experiences
Help seeking as a self-regulated learning strategy and achievement goals: the case of academically talented adolescents	Age more than 16 years
High ability and learner characteristics	Does not focus on learning experiences
Learning and thinking styles of mentally talented students in public and private schools	Does not focus on learning experiences

Learning goal orientation in high ability (HA) and average ability students: developmental trajectories, contextual predictors and long-term educational outcomes	Does not focus on learning experiences -focuses more on the comparison between gifted and average ability students learning goal orientation and outcomes rather than experiences
Mindset misconception? Comparing mindsets, perfectionism and attitudes of achievement in gifted, advances and typical students	Does not focus on learning experiences
Motivating gifted and non gifted students In regular primary schools: a self determination perspective	Does not focus on learning experiences
Motivational differences of Greek gifted and non gifted high-achieving and gifted under-achieving students	Does not focus on learning experiences
Perfectionism in gifted adolescents: a replication and extension	Does not focus on learning experiences
Perfectionism, school motivation, learning styles and academic achievement of G&T and non G&T students	Does not focus on learning experiences
Phantom and big fish little pond effects on academic self concept and academic achievement: evidence from English early primary schools	Does not focus on learning experiences
Similarities and differences between intellectually gifted and average ability students in school performance, motivation and subjective well-being	Study is not explicitly on G&T.
Student characteristics affecting the recognition of high cognitive ability by teachers and peers	Does not focus on learning experiences
The relation between intelligence and the preference for self-regulated learning: a longitudinal study with fourth graders	Does not focus on learning experiences
The speed of information processing of 9-13 year old intellectually gifted children	Does not focus on learning experiences
What happens to the fish's achievement in a little pond? A simultaneous analysis of class-average achievement effects on achievement and academic self-concept	Does not focus on learning experiences
Comparison of motivation system of science learning between gifted students and non gifted students in elementary school	Does not focus on learning experiences
Being called a 'streber': the roles of personality and competition in the labelling of academically oriented students	Study is not explicitly on G&T.
BFLP aspire more: medication and cross-cultural generalizability of school-average ability effects on self-concept and career aspirations in science	Study is not explicitly on G&T.

Big fish in big ponds: contrast and assimilation effects on math and verbal self-concepts of students in within-school gifted tracks	Does not focus on learning experiences.
Cognitive and ono-cognitive impacts of HA peers in early years	Study is not explicitly on G&T.
Competence development of high achievers within the highest track in German secondary school: evidence for Matthew effects or compensation?	Does not focus on learning experiences.
Counselling services for Malaysian gifted students: an initial study	Does not focus on learning experiences.
Epistemological differences between gifted and typically developing middle school students	Does not focus on learning experiences.
Gifted and maladjusted? Implicit attitudes and automatic associations related to gifted students	Study is not explicitly on G&T (Study carried out with preservice teachers).
High and otherwise-achieving students' expectations of classroom group work: an exploratory empirical study	Does not focus on learning experiences.
Learning and classroom preferences of gifted eighth graders: a qualitative study	Participants in a selective setting.
Mathematically gifted accelerated students participating in an ability group: a qualitative interview study	Age more than 16 years.
Middle school students about intelligence and giftedness	Does not focus on learning experiences.
Myth busting: Do high-performance students prefer working alone?	Participants in a selective setting.
Tales from within: gifted students lived experiences with teaching practices in regular classrooms	Age more than 16 years.
Tales gifted children tell: exploring PTAT responses as pathways to socio-affective concerns	Participants are an ethnic minority group
A cross-cultural study of the social experience of giftedness	Age more than 16 years.
Academically gifted students' perceived interpersonal competence and per relationships	Age more than 16 years.
Adolescent perception of potential high-performing classmates: a cross-national exploration	Age more than 16 years.
Adolescents' social perceptions of academic high-performing students: a country and gender comparative study	Study is not explicitly on G&T.
Being bullied at school: the case of high achieving boys	Study is not explicitly on G&T.

Being 'nuff' and 'scudding class': exploring girls' and boys' perceptions of popularity, gender and achievement in Antiguan secondary schools.	Age more than 16 years of age.
Classroom ability composition and the role of academic performance and school misconduct in the formation of academic and friendship networks	Study is not explicitly on G&T students.
Peer effects and academic achievement: a regression discontinuity approach	Age more than 16 years.
Positive social relationships with peers and teachers as moderators of the BFLP effect	Study is not explicitly on G&T students,
Social competencies and difficulties of gifted children compared to non gifted peers	Participants in a selective setting.
Student perceptions of high achieving classmates	Study is not explicitly on G&T students
The dilemmas of peer relationships confronting mathematically gifted female adolescents: nine cases in Taiwan	Participants in a selective setting and does not focus on learning experiences (dilemmas of peer relationships)
The role of academic status norms in friendship selection and influence processed related to academic achievement	Study is not explicitly on G&T students
The role of school-based relationships for school well-being: How different are high- and average – ability students?	Study is not explicitly on G&T students. (Study carried out with teachers).
The simultaneous production of educational achievement and popularity: how do some pupils accomplish it?	Does not focus on learning experiences (focuses on 'popular' G&T students).
Transactional analysis of the reciprocal links between peer experiences and academic achievement from middle childhood to early adolescence	Study is not explicitly on G&T students
Young children selectively expect failure disclosure to high achieving peers	Age less than 5 years of age,
A comparison of high ability pupils' views vs regular ability pupils' views of characteristics of good primary school teachers	Participants in a selective setting.
Attitudes about gifted education among Irish educators	Study is not explicitly on G&T students
Challenging students with high abilities in inclusive math and science classrooms	Study is not explicitly on G&T students
Do stereotypes strike twice? Giftedness and gender stereotypes in pre-service teachers' beliefs about student characteristics in Australia	Study is not explicitly on G&T students
Enhancing preservice teacher development: field experiences with gifted students	Study is not explicitly on G&T students

Examining students' and teachers' perceptions of differentiated practices, student engagement and teacher qualities	Participants in a selective setting.
How Finish elementary school teachers meet the needs of their gifted students	Study is not explicitly on G&T students
Finnish teachers conceptions of giftedness	Study is not explicitly on G&T (Study was carried out with Finnish teachers not G&T students)
Teachers' views about the education of gifted students in regular classrooms	Study is not explicitly on G&T students
Threat or challenge? Teacher beliefs about gifted students and their relationship to teacher motivation	Study is not explicitly on G&T students
Stereotypes of giftedness in current and future educators	Study is not explicitly on G&T students.
Teachers attitudes towards the gifted: the importance of professional development and school culture	Study is not explicitly on G&T students
Teachers conceptions of gifted and average-ability students	Study is not explicitly on G&T students.
Teachers-in-training perceptions of gifted children's characteristics and teacher-child interactions: an experimental study	Study is not explicitly on G&T students.
Teachers' knowledge about intellectual giftedness: a first look at levels and correlates	Study is not explicitly on G&T students.

During the narrative literature review, the researcher categorised the journal articles for ease of reference as follows:

- Family
- G&T characteristics
- Learning experiences
- Social relations
- Teachers

Appendix 3 – Table of the identified topics for each eligible paper

Identified topics	Skelton C., Francis B., Read B., 2010	De Souza Fleith D., 2016	Kanevsky L., 2015	Brigandi C.B., Weiner J.M., Siegle D., Gubbins E.J., Little C.A., 2018	Tereshchenko A.,Francis B., Archer L., Hodgen J., Mazenod A., Taylor B., Perrper D., Travers M., 2019	Lam C. S., Yeung P.P.S., Yuen M 2018	Stoeger H., Steinbach J., Obergriesser S., Matthes B., 2014	Bicknell B., Riley T., 2013	Yuksel M., Arslan S., 2018	Pelchar T.K., Bain S. K., 2014	Ogurlu U., Saicam H., 2018	Kosir K., Horvat M., Aram U., Jurinec N., 2016	Verschueren K., Lavrijsen J., Weyns T., Ramos A., De Fraine B., 2019	Watts J., 2019
Peer relations	√			√	√	√		√	√	√	√	√	√	√
Learning experiences		√	√	√	√	√		√				√		√
Leisure activities									√					
Teacher-student relations	√			√	√	√	√	√						√
Family relations		√		√		√	√	√						

Appendix 4 – Purpose of specific interview questions

General school experiences	***Purpose of question***
• Please tell me a little bit about yourself and about your school career so far.	General overview of the school experience so far – to break the ice and introduce the purpose of the interview.
• You have nearly gone through compulsory schooling. What are your experiences of your: a) primary schooling experience? b) middle /secondary school experience? ○ How are you grouped for lessons and what are your experiences? ○ Do you think that this grouping is meeting your academic, social and emotional needs? ○ Would you group students in a different way? *[perception of streaming of similar abilities].* ○ If you had to change something in this system, to better meet your academic, social and emotional needs, what would it be?	Comparison between primary, middle and secondary school experiences – same, better or worse. To obtain an overview of their experience with the track system and their preferences on the way students are grouped. Establishing their preferences for enhanced learning to take place.

Student's preferred ways of learning	***Purpose of question***
• Tell me about your teachers – how do you feel in their classes? [*delivery & content*]	To obtain an overview of the class climate, their preferred ways of learning and relations with teachers.
• Every teacher has his/her own way of teaching. Which teaching methods do you find most useful and why? Which are least useful and why? [*delivery & content]* ○ Do you feel that teachers understand your learning needs? Why do you think so? *[teacher catering for their needs]* ○ What difficulties do you experience while learning? How do you overcome them? (do you learn faster,	Teaching activities used in class that students find beneficial for their learning (problem solving, hands-on, discussions, autonomous learning) and others which they may find less beneficial (such as repetitive work, less challenging work, lack or resources and being passive during lessons). Obtaining their perception of whether teachers are catering for their needs and teacher expectations. Self-evaluation of their leaning and ways of overcoming them and establishing factors that contribute to their successes and failures.

slower or same rate as your peers?) *[learning pace]*	
• When you are studying or learning something new, what is your preferred method or approach to learning (research on your own, guidance and supervision)? *[autonomous or teacher directed learning]* ○ If you find something you are learning very difficult, how do you react? (persist and keep struggling, ask someone for help immediately, research) [*motivation and perseverance*] ○ Can you tell me about school activities that you like best and why? [*Challenging activities, hands-on activities, group work]*	Establishing preferred ways of learning that cater for their needs. Establishing their motivation / self-regulation, enthusiasm for study, perseverance and persistence to challenges. Preferred activities used in class that cater and support their way of learning such a challenging, innovative, promoting higher order thinking, enrichment activities, use of technology, promoting autonomous learning.
• Name three teachers that you feel have appropriate teaching strategies for you to learn so that I can interview one of them to discuss this further.	Identification of the teacher for the interview.

Social relationships	***Purpose of question***
• Do you feel that your school track affects you socially in or out of school? Has the attitude of your peers changed because of your school track? *[competitiveness and acceptance]* ○ How do you get on with your classmates? Do you find it difficult to make friends? ○ Are there classmates you consider as friends? *[competitiveness and acceptance*, *working relation with peers]*	Changes in peer relations since primary school, during middle school - being popular, competition, being a point of reference. Relationship with peers – popularity, feeling accepted, competition, jealousy, feeling inferior. Establishing which peers, they get along with – sharing same interests, similar abilities, no particular preference.

Family relationships	***Purpose of question***
• How would you describe your family's support in schooling? ○ To what extent does your home environment support your achievements? (Do you feel pressured to get good grades? [*support & encouragement*] ○ Do your parents have expectations for you? Do your parents pressures and expectations, if any, affect your schooling?) [*pressures & expectations]*	Parental understanding and support. Relations with parents – their pressures and expectations, aspirations, encouragement. Self-expectations – comparison with those made by parents.

Personal characteristics	***Purpose of question***
• Do you have any hobbies / extra-curricular activities? Do you feel you have the time to relax to pursue your interests in / out of school? *[type of leisure activities& other talents].* ○ Have you always given equal attention to all the subjects you have at school? What are the reasons for this? [*confidence in specified subjects & motivation*].	Identifying whether they have leisure time, time management, unusual or peculiar interests, examples of extra-curricular activities and reason for their choice. Identifying persistence to challenge, motivation and confidence in specified subjects.

Future aspirations	***Purpose of question***
• What are your choice of subjects? Why did you make this choice? ○ What would you like to become when you grow up? Why have you made this choice? • Are your parents and teachers' expectations in line with yours? [*teacher & parent expectations, self expectations*].	Insight on subjects chosen at school (academic, vocational subjects). Future career aspirations and self-esteem Self-expectations – comparison with parents' and teachers' expectations
• There are several support services in schools (Guidance (study skills), Career advisors, Counsellors, Psychologists etc). Have you found any of these useful? Is there any teacher or person elsewhere whom you consider as your role model? *[support by school services, role model / mentor].*	Use of support services in school and influence from role model (if any).

Concluding questions	*Purpose of question*
• In a few words how do you feel about school generally? ○ Is there anything that is important for you in your school experience which has not been covered in the questions asked which you would like to talk about?	General overview of school experience – intellectual stimulation, understanding and support. Concluding comments and anything the student would like to add

Appendix 5 – Letter of approval

Downloaded: 18/03/2021
Approved: 18/03/2021

Josanne Ghirxi
Registration number: 180131033
School of Education
Programme: EdD (Educational Studies)

Dear Josanne

PROJECT TITLE: Exploring the Learning Experiences of Year 10 Students in Maltese State Schools attending Top-set Classes and Comparing them to Average Ability Classes
APPLICATION: Reference Number 037645

On behalf of the University ethics reviewers who reviewed your project, I am pleased to inform you that on 18/03/2021 the above-named project was **approved** on ethics grounds, on the basis that you will adhere to the following documentation that you submitted for ethics review:

- University research ethics application form 037645 (form submission date: 28/02/2021); (expected project end date: 31/08/2022).
- Participant information sheet 1085403 version 3 (28/02/2021).
- Participant information sheet 1085406 version 2 (28/02/2021).
- Participant information sheet 1085405 version 3 (28/02/2021).
- Participant information sheet 1085404 version 3 (28/02/2021).
- Participant consent form 1085399 version 3 (28/02/2021).
- Participant consent form 1085400 version 3 (28/02/2021).
- Participant consent form 1085401 version 3 (28/02/2021).
- Participant consent form 1085402 version 3 (28/02/2021).

If during the course of the project you need to deviate significantly from the above-approved documentation please inform me since written approval will be required.

Your responsibilities in delivering this research project are set out at the end of this letter.

Yours sincerely

David Hyatt
Ethics Administrator
School of Education

Please note the following responsibilities of the researcher in delivering the research project:

- The project must abide by the University's Research Ethics Policy: https://www.sheffield.ac.uk/rs/ethicsandintegrity/ethicspolicy/approval-procedure
- The project must abide by the University's Good Research & Innovation Practices Policy: https://www.sheffield.ac.uk/polopoly_fs/1.671066!/file/GRIPPolicy.pdf
- The researcher must inform their supervisor (in the case of a student) or Ethics Administrator (in the case of a member of staff) of any significant changes to the project or the approved documentation.
- The researcher must comply with the requirements of the law and relevant guidelines relating to security and confidentiality of personal data.
- The researcher is responsible for effectively managing the data collected both during and after the end of the project in line with best practice, and any relevant legislative, regulatory or contractual requirements.

Appendix 6 – Research authorization letter

GOVERNMENT OF MALTA
MINISTRY FOR EDUCATION
DIRECTORATE FOR RESEARCH, LIFELONG LEARNING AND EMPLOYABILITY

Tel: 25982743 **researchandinnovation@ilearn.edu.mt**

PERMISSION TO CONDUCT RESEARCH STUDY

Date: 19th May 2021

Ref: R05-2021 806

To: **Head of School – STMC Zejtun Secondary School**
From: **Director**

Title of Research Study: ***Exploring the Learning Experiences of Year 10 Students in Maltese State Schools attending Top-set Classes and Comparing them to Average Ability Classes.***

The Directorate for Research, Lifelong Learning and Employability would like to inform that approval is granted to **Josanne Ghirxi** to conduct the research in State Schools according to the official rules and regulations, subject to approval from the Ethics Committee of the respective Higher Educational Institution.

The researcher is committed to comply with the General Data Protection Regulation (GDPR) and will ensure that these requirements are followed in the conduct of this research. The researcher will be sending letters with clear information about the research, as well as consent forms to all data subjects and their parents/guardians when minors are involved. Consent forms should be signed in all cases particularly for the participation of minors in research.

For further details about our policy for research in schools, kindly visit www.research.gov.mt.

Thank you for your attention and cooperation.

Claire Mamo
MA Ed (Open)
Research Support Teacher
Directorate for Research, Lifelong Learning and Employability

f/ Alex Farrugia
Director
Directorate for Research, Lifelong Learning and Employability
Great Siege Road | Floriana | VLT 2000
t: +356 25982443 e: alex.farrugia@gov.mt | www.education.gov.mt

MINISTRY FOR EDUCATION

MINISTERU GĦALL-EDUKAZZJONI
MINISTRY FOR EDUCATION

Appendix 7 – Information letters to participants

5th April 2021

Information letter to students

Dear student,

My name is Josanne Ghirxi and I am conducting research for my educational doctorate with the University of Sheffield. I am carrying out research on students across a range of different academic abilities which is being supervised by Dr Anna Weighall and Dr Lauren Powell.

This letter is an invitation to participate in this study. Before you decide whether or not to participate, it is important for you to understand why the research is being done and what it will involve. Please take time to read the information below about the study and about what your involvement would entail, should you decide to take part. Ask us if there is anything that is not clear or if you would like more information. Take time to decide whether you may wish to take part. Thank you for reading this.

What is the project's purpose?

The aim of my research is to listen to your learning experiences throughout your school years. I am interested to know about how these experiences affected your learning. Since the introduction of different sets in the secondary school, the learning experiences of students in different classes has not been researched.

Why have I been chosen?

You are now in Year 10 and you have nearly completed your years of compulsory schooling. You have experienced different sets at school which may have affected your learning. Therefore, your participation in this study will help contribute to understanding further ways on how to improve the learning experiences of students in our schools.

Do I have to take part?

As well as your agreement to take part in this research, I also need your parent / guardian's permission for you to be involved in the research. I have written them a letter very similar to this asking for their consent and asking them to participate in an interview. Should your parent / guardian consent to your participation and you also choose to participate, you will be asked to answer open ended questions in an individual interview regarding your learning experiences in schools. The interview will be audio recorded for research purposes should you give your consent, otherwise handwritten notes will be taken during the interview. At the end of the interview I can explain a summary of the notes taken to

confirm that it reflects your views. If the interview is audio recorded and if you wish, you will receive your own copy of the interview. You are free to ask for data from this copy to be amended or removed within two weeks of receiving the copy.

It is up to you to decide whether to take part, even though your parent / guardian may have given consent for your participation. You are participating on a voluntarily basis and you are free to accept or refuse to participate, without giving a reason. If you do decide to take part, you will be given this information sheet to keep and you will be asked to sign a consent form.

What will happen to me if I take part? What do I have to do?

In view of the Covid situation, should you wish to take part, the interview may be held online. However, if it would be possible, a face-to-face interview may be carried out. The interview will take approximately 30 – 45 minutes and will be conducted in a place and time that is convenient for you. During the interview you will be asked about your learning experiences at school and you will be asked to select three teachers who are contributing to your learning experience. One of these teachers will also be eventually interviewed to learn more about her teaching methods.

Should you choose to participate, this information letter and the consent form is to be signed and sent back to me via email (scanned or photographed) or via post.

What are the possible disadvantages and risks of taking part?

Your participation does not involve any known risks.

What are the possible benefits of taking part?

If you choose to participate, please note that there are no direct benefits to you.

Will my taking part in this project be kept confidential?

All the information collected about you during the research will be kept strictly confidential and will only be shared with my supervisors. You will not be able to be identified in the study, reports or publications unless you specifically request to do so.

What is the legal basis for processing my personal data?

According to data protection legislation, the legal basis that will be applied for your personal data to be processed is that "processing is necessary for the performance of a task carried out in the public interest (General Data Protection Regulation (2018) (Article 6(1)(e))

What will happen to the data collected, and the results of the research project?

The recorded information and my notes will remain confidential and no one else except me and possibly my supervisors will be allowed to listen to the recording or view my notes. The recordings

and notes will be initially stored on my personal laptop which is password protected. They will be uploaded to the secure University of Sheffield Google Drive Account immediately after recording and then destroyed from the recording device. Access will only be granted to myself and my supervisors. Personal details will be stored on the secure University of Sheffield server, UniFileStore which is the accepted secure storage for personal data.as per University of Sheffield guidelines.

Any information provided by you during the interview will be used for research purposes only and you will remain anonymous. Your responses will not be linked to your name and/or your real name will not appear anywhere in this research project or in any publications or presentations arising from the research. That is to say, you will not be identified in any way. Upon completion of the study, all data collected will be deleted by not later than three years after completion of the thesis (December 2023).

Who is organising and funding the research?

This research is in partial fulfilment for my educational doctorate (EdD) with the University of Sheffield. Although the EdD programme is funded by Malta's Tertiary Education Scholarship scheme (TESS) there is no financial support for this research.

Who is the Data Controller?

The University of Sheffield will act as the Data Controller for this study. This means that the University of Sheffield is responsible for looking after your information and using it properly.

Who has ethically reviewed the project?

This project has been ethically approved via the University of Sheffield's Ethics Review Procedure, as administered by School of Education.

What if something goes wrong and I wish to complain about the research?

You may withdraw from the study at any time within a month from the interview date, by reaching me on the contact details below, without any consequence or need for explanation. Should you wish to withdraw, any data collected from your interview will be deleted immediately.

Contact for further information

A copy of this information sheet is being provided for you to keep and for future reference.

Thank you for your time and consideration. Should you have any questions or concerns please do not hesitate to contact me by email jghirxi1@sheffield.ac.uk or phone +356 79702673 or my supervisors on l.a.powell@sheffield.ac.uk and anna.weighall@sheffield.ac.uk.

Thank you for taking the time to read through this letter and should you wish to participate in this research please sign the consent form.

Sincerely

Josanne Ghirxi

jghirxi1@sheffield.ac.uk

5th April 2021

Information letter to parent / guardian

Dear Sir / Madam,

My name is Josanne Ghirxi and I am conducting research for my educational doctorate with the University of Sheffield. I am carrying out research on students across a range of different academic abilities which is being supervised by Dr Anna Weighall and Dr Lauren Powell.

This letter seeks consent for:

a. your personal participation; and
b. to give consent to your son / daughter for their participation, although their personal consent is also required.

Before you decide on your participation and to give consent that your son/ daughter participates, it is important for you to understand why the research is being done and what it will involve. Please take time to read the information below about the study and about what your involvement would entail, should you decide to take part. Ask us if there is anything that is not clear or if you would like more information. Take time to decide whether you and / or your son / daughter may wish to take part. Thank you for reading this.

What is the project's purpose?

The aim of my research is to listen to the learning experiences of students from different sets at school. I am interested to know about how these experiences affected their learning. Since the introduction of different sets in the secondary school, the learning experiences of students in different classes has not been researched.

Why have me and my son / daughter been chosen?

Your son / daughter has nearly completed his/her years of compulsory schooling and has experienced different sets at school which may have affected his/her learning. I am interested to learn about these experiences from your son/ daughter and how these experiences are perceived by you as their parent/ guardian. I am also interested on your approach to support your son/daughter.

Do me and my son / daughter have to take part?

The participation of your son/daughter in this study will help contribute to understand further ways on how to improve the learning experiences of students in our schools. Since your son/daughter is still

a minor, I need your permission for your son/daughter's participation in the project. Once you agree, I will explain the nature of the research to your son/daughter and ask for his/her acceptance to participate. Both you and your son /daughter can withdraw any time from the participation of this research without any consequences or need for explanation.

Should you choose to participate, you will be asked to answer open ended questions in an individual interview regarding your perception of your son / daughter's learning experiences in schools and how you support him/her. The interview will be audio recorded for research purposes should you give your consent, otherwise handwritten notes will be taken during the interview. At the end of the interview I can explain a summary of the notes taken to confirm that it reflects your views. If the interview is audio recorded and if you wish, you will receive your own copy of the interview. You are free to ask for data from this copy to be amended or removed within two weeks of receiving the copy.

You and your son/daughter are participating on a voluntarily basis and you are free to accept or refuse to participate, without giving a reason. If you and your son/daughter do decide to take part, you will be given this information sheet to keep and you will be asked to sign a consent form.

What will happen to me and my son/daughter if we take part? What do we have to do?

In view of the Covid situation, should you wish to take part, the interview may be held online. However, if it would be possible, a face-to-face interview may be carried out. The interview will take approximately 30 – 45 minutes and will be conducted in a place and time that is convenient for you.

Should you and /or your son/daughter choose to participate, this information letter and the consent form is to be signed and sent back to me via email (scanned or photographed) or via post

What are the possible disadvantages and risks of taking part?

Your participation and that of your son/daughter does not involve any known risks.

What are the possible benefits of taking part?

If you and your son/daughter choose to participate, please note that there are no direct benefits to you.

Will my taking part in this project and that of my son/daughter be kept confidential?

All the information collected about you and your son / daughter during the research will be kept strictly confidential and will only be shared with my supervisors. You and your son/daughter will not be identified in the study, reports or publications unless you specifically request to do so.

What is the legal basis for processing my personal data and that of my son/daughter?

According to data protection legislation, the legal basis that will be applied for your personal data and that of your son/daughter to be processed is that "processing is necessary for the performance of a task carried out in the public interest (General Data Protection Regulation (2018) (Article 6(1)(e))

What will happen to the data collected, and the results of the research project?

The recorded information and my notes will remain confidential and no one else except me and possibly my supervisors will be allowed to listen to the recording or view my notes. The recordings and notes will be initially stored on my personal laptop which is password protected. They will be uploaded to the secure University of Sheffield Google Drive Account immediately after recording and then destroyed from the recording device. Access will only be granted to myself and my supervisors. Personal details will be stored on the secure University of Sheffield server, UniFileStore which is the accepted secure storage for personal data.as per University of Sheffield guidelines.

Any information provided by you and your son/daughter during the interview will be used for research purposes only and you will remain anonymous. Your responses will not be linked to your name and/or your real name will not appear anywhere in this research project or in any publications or presentations arising from the research. That is to say, you will not be identified in any way. Upon completion of the study, all data collected will be deleted by not later than three years after completion of the thesis (December 2023).

Who is organising and funding the research?

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Who has ethically reviewed the project?

This project has been ethically approved via the University of Sheffield's Ethics Review Procedure, as administered by School of Education.

What if something goes wrong and I wish to complain about the research?

You may withdraw from the study at any time within a month from the interview date, by reaching me on the contact details below, without any consequence or need for explanation. Should you and / or your son/daughter wish to withdraw, any data collected from your interview will be deleted immediately.

Contact for further information

A copy of this information sheet is being provided for you to keep and for future reference. Thank you for your time and consideration. Should you have any questions or concerns please do not hesitate to contact me by email jghirxi1@sheffield.ac.uk or phone +356 79702673 or my supervisors on l.a.powell@sheffield.ac.uk and anna.weighall@sheffield.ac.uk.

Thank you for taking the time to read through this letter and should you and / or your son/daughter wish to participate in this research please sign the consent forms.

Sincerely

Josanne Ghirxi

jghirxi1@sheffield.ac.uk

5th April 2021

Information letter to teachers

Dear Sir / Madam,

My name is Josanne Ghirxi and I am conducting research for my educational doctorate with the University of Sheffield. I am carrying out research on students across a range of different academic abilities which is being supervised by Dr Anna Weighall and Dr Lauren Powell.

This letter is an invitation to participate in this study. Before you decide whether to participate, it is important for you to understand why the research is being done and what it will involve. Please take time to read the information below about the study and about what your involvement would entail, should you decide to take part. Ask us if there is anything that is not clear or if you would like more information. Take time to decide whether or not you may wish to take part. Thank you for reading this.

What is the project's purpose?

The aim of my research is to listen to the learning experiences of students from different sets. I am interested to know how these experiences affected their learning. Since the introduction of different sets in the secondary school, the learning experiences of students in different classes has not been researched. Participation in this study will help contribute to understanding further ways on how to improve the learning experiences of students in our schools.

Why have I been chosen?

Year 10 students have nearly completed their years of compulsory schooling and have experienced different sets at school which may have affected their learning. A student who participated in the study has selected you since s/he feels that you are contributing to their learning experience. I am interested to learn about these experiences from the selected students and how these experiences are perceived by you as their teacher.

Do I have to take part?

Should you choose to participate, you will be asked to answer open ended questions in an individual interview regarding your perception of their learning experiences in schools, how you manage the curriculum and your expectations for these students. The interview will be audio recorded for research purposes should you give your consent, otherwise handwritten notes will be taken during the interview. At the end of the interview I can explain a summary of the notes taken to confirm that it reflects your views. If the interview is audio recorded and if you wish, you will receive your own copy

of the interview. You are free to ask for data from this copy to be amended or removed within two weeks of receiving the copy.

You are participating on a voluntarily basis and you are free to accept or refuse to participate, without giving a reason. You may withdraw from the study at any time within a month from the interview date, by reaching me on the contact details below, without any consequence or need for explanation. Should you wish to withdraw, any data collected from your interview will be deleted immediately. If you do decide to take part, you will be given this information sheet to keep and you will be asked to sign a consent form.

What will happen to me if I take part? What do I have to do?

In view of the Covid situation, should you wish to take part, the interview may be held online. However, if it would be possible, a face-to-face interview may be carried out. The interview will take approximately 30 – 45 minutes and will be conducted in a place and time that is convenient for you.

Should you choose to participate, this information letter and the consent form is to be signed and sent back to me via email (scanned or photographed) or via post.

What are the possible disadvantages and risks of taking part?

Your participation does not involve any known risks.

What are the possible benefits of taking part?

If you choose to participate, please note that there are no direct benefits to you.

Will my taking part in this project be kept confidential?

All the information collected about you during the research will be kept strictly confidential and will only be shared with my supervisors. You will not be identified in the study, reports or publications unless you specifically request to do so.

What is the legal basis for processing my personal data?

According to data protection legislation, the legal basis that will be applied for your personal data to be processed is that "processing is necessary for the performance of a task carried out in the public interest (General Data Protection Regulation (2018) (Article 6(1)(e))

What will happen to the data collected, and the results of the research project?

The recorded information and my notes will remain confidential and no one else except me and possibly my supervisors will be allowed to listen to the recording or view my notes. The recordings and notes will be initially stored on my personal laptop which is password protected. They will be uploaded to the secure University of Sheffield Google Drive Account immediately after recording and then destroyed from the recording device. Access will only be granted to myself and my supervisors.

Personal details will be stored on the secure University of Sheffield server, UniFileStore which is the accepted secure storage for personal data.as per University of Sheffield guidelines.
Any information provided by you during the interview will be used for research purposes only and you will remain anonymous. Your responses will not be linked to your name and/or your real name will not appear anywhere in this research project or in any publications or presentations arising from the research. That is to say, you will not be identified in any way. Upon completion of the study, all data collected will be deleted by not later than three years after completion of the thesis (December 2023).

Who is organising and funding the research?

This research is in partial fulfilment for my educational doctorate (EdD) with the University of Sheffield. Although the EdD programme is funded by Malta's Tertiary Education Scholarship scheme (TESS) there is no financial support for this research.

Who is the Data Controller?

The University of Sheffield will act as the Data Controller for this study. This means that the University of Sheffield is responsible for looking after your information and using it properly.

Who has ethically reviewed the project?

This project has been ethically approved via the University of Sheffield's Ethics Review Procedure, as administered by the School of Education.

What if something goes wrong and I wish to complain about the research?

You may withdraw from the study at any time within a month from the interview date, by reaching me on the contact details below, without any consequence or need for explanation. Should you wish to withdraw, any data collected from your interview will be deleted immediately.

Contact for further information

A copy of this information sheet is being provided for you to keep and for future reference.
Thank you for your time and consideration. Should you have any questions or concerns please do not hesitate to contact me by email jghirxi1@sheffield.ac.uk or phone +356 79702673 or my supervisors on l.a.powell@sheffield.ac.uk and anna.weighall@sheffield.ac.uk.

Thank you for taking the time to read through this letter and should you wish to participate in this research please sign the consent form.

Sincerely

Josanne Ghirxi
jghirxi1@sheffield.ac.uk

Appendix 8 – Consent forms

The University Of Sheffield.

Student Consent Form

I, the undersigned give my consent to take part in the in the research on students across a range of different academic abilities conducted by Josanne Ghirxi. This consent form specifies the terms of my participation in this research.

Please tick the appropriate boxes	**Yes**	**No**
Taking Part in the Project		
I have read and understood the research information sheet dated 5th April 2021 or the research has been fully explained to me. (If you will answer No to this question please do not proceed with this consent form until you are fully aware of what your participation in the project will mean.)	☐	☐
I have been given the opportunity to ask questions about the project.	☐	☐
I agree to take part in the research. I understand that taking part in the research will include participating in an individual interview with open ended questions regarding my learning experiences in schools. The interview may be audio recorded for research purposes should you give your consent, otherwise handwritten notes will be taken during the session..	☐	☐
I understand that by choosing to participate as a volunteer in this research, this does not create a legally binding agreement nor is it intended to create an employment relationship with the University of Sheffield.	☐	☐
I understand that my taking part is voluntary and that I can withdraw from the research at any time within a month from the interview date; I do not have to give any reasons for why I no longer want to take part and there will be no adverse consequences if I choose to withdraw.	☐	☐
How my information will be used during and after the project		
I understand my personal details such as name, phone number, address and email address etc. will not be revealed to people outside the project.	☐	☐
I understand and agree that my words may be quoted in publications, reports, web pages, and other research outputs. I understand that I will not be named in these outputs unless I specifically request this.	☐	☐
I understand and agree that other authorised researchers will have access to this data only if they agree to preserve the confidentiality of the information as requested in this form.	☐	☐
I understand and agree that other authorised researchers may use my data in publications, reports, web pages, and other research outputs, only if they agree to preserve the confidentiality of the information as requested in this form.	☐	☐
I give permission for the demographic details and recorded information during the interview sessions to be password protected and saved on the University of Sheffield Google Drive Account until deleted by not later than three years after completion of the thesis (December 2023). Only the researcher and the supervisor will have access to this information.	☐	☐
So that the information you provide can be used legally by the researchers		
I agree to assign the copyright I hold in any materials generated as part of this project to The University of Sheffield.	☐	☐

Name of Participant	Signature	Date
Click or tap here to enter text.		Click or tap here to enter text.
Name of Researcher	Signature	Date
Josanne Ghirxi		Click or tap here to enter text.

Project contact details for further information:
Should you have any questions or concerns please do not hesitate to contact me by email jghirxi1@sheffield.ac.uk or phone +356 79702673 or my supervisors on l.a.powell@sheffield.ac.uk and anna.weighall@sheffield.ac.uk.

The template of this consent form has been approved by the University of Sheffield Research Ethics Committee and is available to view here: https://www.sheffield.ac.uk/rs/ethicsandintegrity/ethicspolicy/further-guidance/homepage

Parent / Guardian Consent Form for participation

, the undersigned give my consent to take part in the research on students across a range of different academic abilities conducted by Josanne Ghirxi. This consent form specifies the terms of my participation in this research.

Please tick the appropriate boxes	**Yes**	**No**
Taking Part in the Project		
I have read and understood the research information sheet dated 5th April 2021 or the research has been fully explained to me. (If you will answer No to this question please do not proceed with this consent form until you are fully aware of what your participation in the project will mean.)	☐	☐
I have been given the opportunity to ask questions about the project.	☐	☐
I agree to take part in the research. I understand that taking part in the research will include participating in an individual interview with open ended questions regarding my perceptions of learning experiences of my son/daughter. The interview may be audio recorded for research purposes should you give your consent, otherwise handwritten notes will be taken during the session..	☐	☐
I understand that by choosing to participate as a volunteer in this research, this does not create a legally binding agreement nor is it intended to create an employment relationship with the University of Sheffield.	☐	☐
I understand that my taking part is voluntary and that I can withdraw from the research at any time within a month from the interview date; I do not have to give any reasons for why I no longer want to take part and there will be no adverse consequences if I choose to withdraw.	☐	☐
How my information will be used during and after the project		
I understand my personal details such as name, phone number, address and email address etc. will not be revealed to people outside the project.	☐	☐
I understand and agree that my words may be quoted in publications, reports, web pages, and other research outputs. I understand that I will not be named in these outputs unless I specifically request this.	☐	☐
I understand and agree that other authorised researchers will have access to this data only if they agree to preserve the confidentiality of the information as requested in this form.	☐	☐
I understand and agree that other authorised researchers may use my data in publications, reports, web pages, and other research outputs, only if they agree to preserve the confidentiality of the information as requested in this form.	☐	☐
I give permission for the demographic details and recorded information during the interview sessions to be password protected and saved on the University of Sheffield Google Drive Account until deleted by not later than three years after completion of the thesis (December 2023). Only the researcher and the supervisor will have access to this information.	☐	☐
So that the information you provide can be used legally by the researchers		
I agree to assign the copyright I hold in any materials generated as part of this project to The University of Sheffield.	☐	☐

Name of Participant	Signature	Date
Click or tap here to enter text.		Click or tap here to enter text.
Name of Researcher	Signature	Date
Josanne Ghirxi		Click or tap here to enter text.

Project contact details for further information:
Should you have any questions or concerns please do not hesitate to contact me by email jghirxi1@sheffield.ac.uk or phone +356 79702673 or my supervisors on l.a.powell@sheffield.ac.uk and anna.weighall@sheffield.ac.uk.

The template of this consent form has been approved by the University of Sheffield Research Ethics Committee and is available to view here: https://www.sheffield.ac.uk/rs/ethicsandintegrity/ethicspolicy/further-guidance/homepage

The University Of Sheffield.

Parent / Guardian Consent Form for Participation of Son/ Daughter

I, the undersigned, give my consent for my son/daughter to take part in the in the research on students across a range of different academic abilities conducted by Josanne Ghirxi. This consent form specifies the terms of my son / daughter's participation in this research.

Please tick the appropriate boxes	**Yes**	**No**
Taking Part in the Project		
I have read and understood the research information sheet dated 5th April 2021 or the research has been fully explained to me. (If you will answer No to this question please do not proceed with this consent form until you are fully aware of what your participation in the project will mean.)	☐	☐
I have been given the opportunity to ask questions about the project.	☐	☐
I agree that my son/daughter takes part in the research. I understand that taking part in the research will include my son/daughter participating in an individual interview with open ended questions regarding his/her learning experiences at school. The interview may be audio recorded for research purposes should you give your consent, otherwise handwritten notes will be taken during the session..	☐	☐
I understand that my son / daughter's participation as a volunteer in this research, does not create a legally binding agreement nor is it intended to create an employment relationship with the University of Sheffield.	☐	☐
I understand that my son/daughter taking part is voluntary and that s/he can withdraw from the research at any time within a month from the interview date; s/he does not have to give any reasons for why s/he no longer wants to take part and there will be no adverse consequences if s/he chooses to withdraw.	☐	☐
How my information will be used during and after the project		
I understand my son/daughter's personal details such as name, phone number, address and email address etc. will not be revealed to people outside the project.	☐	☐
I understand and agree that my son/daughter's words may be quoted in publications, reports, web pages, and other research outputs. I understand that my son/daughter will not be named in these outputs unless I s/he specifically request this.	☐	☐
I understand and agree that other authorised researchers will have access to my son/daughter's data only if they agree to preserve the confidentiality of the information as requested in this form.	☐	☐
I understand and agree that other authorised researchers may use my son/daughter's data in publications, reports, web pages, and other research outputs, only if they agree to preserve the confidentiality of the information as requested in this form.	☐	☐
I give permission for the demographic details and recorded information during the interview sessions that my son/daughter provide to be password protected and saved on the University of Sheffield Google Drive Account until deleted by not later three years after completion of the thesis (December 2023). Only the researcher and the supervisor will have access to this information.	☐	☐
So that the information you provide can be used legally by the researchers		
I agree to assign the copyright I hold in any materials generated as part of this project to The University of Sheffield.	☐	☐

Name of Parent/Guardian	Signature	Date
Click or tap here to enter text.		Click or tap here to enter text.
Name of Researcher	Signature	Date
Josanne Ghirxi		Click or tap here to enter text.

Project contact details for further information:
Should you have any questions or concerns please do not hesitate to contact me by email jghirxi1@sheffield.ac.uk or phone +356 79702673 or my supervisors on l.a.powell@sheffield.ac.uk and anna.weighall@sheffield.ac.uk.

The template of this consent form has been approved by the University of Sheffield Research Ethics Committee and is available to view here: https://www.sheffield.ac.uk/rs/ethicsandintegrity/ethicspolicy/further-guidance/homepage

The University Of Sheffield.

Teacher Consent Form

I, the undersigned give my consent to take part in the research on students across a range of different academic abilities conducted by Josanne Ghirxi. This consent form specifies the terms of my participation in this research.

Please tick the appropriate boxes	**Yes**	**No**
Taking Part in the Project		
I have read and understood the research information sheet dated 5th April 2021 or the research has been fully explained to me. (If you will answer No to this question please do not proceed with this consent form until you are fully aware of what your participation in the project will mean.)	☐	☐
I have been given the opportunity to ask questions about the project.	☐	☐
I agree to take part in the research. I understand that taking part in the research will include participating in an individual interview with open ended questions regarding my perceptions of learning experiences of students. The interview may be audio recorded for research should you give your consent, otherwise handwritten notes will be taken during the session.	☐	☐
I understand that by choosing to participate as a volunteer in this research, this does not create a legally binding agreement nor is it intended to create an employment relationship with the University of Sheffield.	☐	☐
I understand that my taking part is voluntary and that I can withdraw from the research at any time within a month from the interview date; I do not have to give any reasons for why I no longer want to take part and there will be no adverse consequences if I choose to withdraw.	☐	☐
How my information will be used during and after the project		
I understand my personal details such as name, phone number, address and email address etc. will not be revealed to people outside the project.	☐	☐
I understand and agree that my words may be quoted in publications, reports, web pages, and other research outputs. I understand that I will not be named in these outputs unless I specifically request this.	☐	☐
I understand and agree that other authorised researchers will have access to this data only if they agree to preserve the confidentiality of the information as requested in this form.	☐	☐
I understand and agree that other authorised researchers may use my data in publications, reports, web pages, and other research outputs, only if they agree to preserve the confidentiality of the information as requested in this form.	☐	☐
I give permission for the demographic details and recorded information during the interview sessions to be password protected and saved on the University of Sheffield Google Drive Account until deleted by not later than three years after completion of the thesis (December 2023). Only the researcher and the supervisor will have access to this information.	☐	☐
So that the information you provide can be used legally by the researchers		
I agree to assign the copyright I hold in any materials generated as part of this project to The University of Sheffield.	☐	☐

Name of participant	Signature	Date
Name of Researcher Josanne Ghirxi	Signature	Date

Project contact details for further information:
Should you have any questions or concerns please do not hesitate to contact me by email jghirxi1@sheffield.ac.uk or phone +356 79702673 or my supervisors on l.a.powell@sheffield.ac.uk and anna.weighall@sheffield.ac.uk.

The template of this consent form has been approved by the University of Sheffield Research Ethics Committee and is available to view here: https://www.sheffield.ac.uk/rs/ethicsandintegrity/ethicspolicy/further-guidance/homepage

Appendix 9 – Interview questions

Interview questions- students

General school experiences

- Please tell me a little bit about yourself and about your school career so far.
- You have nearly gone through compulsory schooling. What are your experiences of your (a) primary schooling years, (b) middle / secondary schooling years?
    - How are you grouped for lessons and what are your experiences?
    - Do you think that this grouping is meeting your academic, social and emotional needs?
    - Would you group students in a different way? *[perception of streaming of similar abilities]*
    - If you had to change something in this system, to better meet your academic, social and emotional needs, what would it be?

Student's preferred ways of learning

- Tell me about your teachers – how do you feel in their classes? [*delivery & content*]
- Every teacher has his/her own way of teaching. Which teaching methods do you find most useful and why? Which are least useful and why? [*delivery & content]*
    - Do you feel that teachers understand your learning needs? Why do you think so? *[teacher catering for their needs]*
    - What difficulties do you experience while learning? How do you overcome them? (do you learn faster, slower or same rate as your peers?) *[learning pace]*
- When you are studying or learning something new, what is your preferred method or approach to learning (research on your own, guidance and supervision)? *[autonomous or teacher directed learning]*
    - If you find something you are learning very difficult, how do you react? (persist and keep struggling, ask someone for help immediately, research) [*motivation and perseverance*]
    - Can you tell me about school activities that you like best and why? [*Challenging activities, hands-on activities, group work, working independently]*
- Name three teachers that you feel have appropriate teaching strategies for you to learn so that I can interview one of them to discuss this further.

Social relationships

- Do you feel that your school track affects you socially in or out of school? Has the attitude of your peers changed because of your school track? *[competitiveness and acceptance].*
    - How do you get on with your classmates? Do you find it difficult to make friends?

- Are there classmates you consider as friends? *[competitiveness and acceptance, working relation with peers].*

Family relationships

- How would you describe your family's support in schooling?
    - To what extent does your home environment support your achievements? (Do you feel pressured to get good grades?) [*support & encouragement*]
    - Do your parents have expectations for you? Do your parents' pressures and expectations, if any, affect your schooling? [*pressures & expectations]*

Personal characteristics

- Do you have any hobbies / extra-curricular activities? Do you feel you have the time to relax to pursue your interests in / out of school? *[type of leisure activities& other talents]*
    - Have you always given equal attention to all the subjects you have at school? What are the reasons for this? [*confidence in specified subjects & motivation*].

Future aspirations

- What is your choice of subjects? Why did you make this choice?
    - What would you like to become when you grow up? Why was this choice made?
    - Are your parents and teachers' expectations in line with yours? [*teacher & parent expectations, self-expectations].*

- There are several support services in schools (Guidance (study skills), Career advisors, Counsellors, Psychologists, *etc*). Have you found any of these useful? Is there any teacher or person elsewhere whom you consider as your role model? *[support by school services, role model / mentor].*

Concluding questions

- In a few words how do you feel about school generally?
    - Is there anything that is important for you in your school experience which has not been covered in the questions asked which you would like to talk about.

Interview questions- parents

General experience

- Male ☐ Female ☐
- Age bracket: 20 - 30, 30 – 40, 40 – 50, over 50s
- What is your occupation?
- How many children do you have? What birth order is your son/ daughter?
- Your son/ daughter has nearly gone through compulsory schooling? What is your perception of your son/daughter's experiences of schooling until now?
    - What are your views on tracks in secondary schools? Do you think these tracks are meeting the academic, social, and emotional needs of your son/daughter? Would you group the students in a different way?
    - If you had to change something in the system (tracks) that, in your opinion, would meet the academic, social, and emotional needs of son / daughter, what would it be?

Students preferred ways of learning

- Every teacher has his/her own way of teaching. Which teaching methods does your son/daughter prefer?
- Do you feel that teachers understand your son/daughter's particular learning needs? Are they being addressed in class?
    - What challenges, if any, does your son / daughter encounter when learning? How does s/he overcome them? (does s/he learn faster, slower or same rate as his/her peers?
    - When s/he is studying or learning something new, what is his/her preferred method / approach to learning? (research on his/her own, guidance and supervision)?
    - If your son/daughter finds something s/he is learning very difficult how does s/he react? (persist and keep struggling, ask someone for help immediately, research)
    - Can you tell me about school activities that your son/daughter likes best and why? [*Challenging activities, hands-on activities, group work, working independently]*

Social relationships

- Do you feel that your son/daughter's school track affects him/her socially in or out of school?
    - Do you think that the attitude of their peers changed because of your son/daughter's school track?
    - How does your son/daughter get on with his/her classmates? Does s/he find it difficult to make friends? Are there classmates that s/he considers as friends?

Family relationships

- How do you support your son/daughter? To what extent do you think that the home environment supports your son/daughter's school achievements?
    - Do you have expectations for your son/ daughter? What are they?

Personal characteristics

- Does your son/daughter give equal attention to all subjects s/he has at school?
    - What are the reasons for this?
- Does your son/daughter have any hobbies / extra-curricular activities?
    - Do you feel s/he has the time to relax to pursue their interests in / out of school?

Future aspirations

- What is your son / daughter's choice of subjects? Why was this choice made?
    - What would your son/daughter like to become when s/he grows up?
    - Is your son/daughter's career aspirations in line with your expectations and those of their teachers?
- There are several support services in schools. Has your son/daughter found any of these useful? Is there any teacher or person in/out of school that your son/daughter considers as his/her role model?

Concluding questions

- Is there anything else you would like to add on the learning experiences of your son/daughter which has not been covered in the questions asked, which you would like to talk about?

Interview questions- teachers

Introduction - General experience

Male Female

Age bracket: 20 -30, 30 – 40, 40 – 50, over 50s

- How long have you been teaching and what subjects do you teach?
- Do you teach Track 1, 2, 3 or all tracks?
    - If one of them is no – have you ever taught track 2 or 3 in previous years?
- What are your views on settings in secondary schools?
    - Do you think these tracks are meeting the academic, social and emotional needs of the students? Would you group the students in a different way?
    - If you had to change something in the system (tracks), which in your opinion would meet the academic, social and emotional needs of students, what would it be?

Students preferred ways of learning

- Every teacher has his/her own way of teaching. Which teaching methods do you use most between the different classes in track 3? Why?
    - Are there any particular strategies that you use with students in the different classes in track 3? If yes - What are these strategies and why do you use them with these students?
- Do you feel that you understand the particular learning needs of the students you teach in the different classes in track 3?
    - Do students with different abilities in track 3 have particular needs that need to be addressed during lessons planning/ in class? Why do you think so?
    - What challenges, if any, do you encounter when you teach the different classes in track 3?
    - When students with different abilities in track 3 are studying or learning something new, do they have a preferred approach to learning?
    - When students with different abilities in track 3 find something in learning difficult, how do they react?
    - Which are the favourite school activities for students with different abilities in track 3?

Social relationships

- Do you feel that students with different abilities in track 3 affect the students socially in or out of school?
    - Do the attitudes of their peers change when students are placed in particular tracks?
    - How do track 3 students with different abilities get along with their classmates? Do they find it difficult to make friends? Do they have friends in other tracks?

Family relationships

- How would you describe family support in schooling for students with different abilities in track 3?
    - Are the parents' expectations in line with those of their son/daughter with different abilities in track 3?

Personal characteristics

- Do students with different abilities in track 3 give equal attention to all subjects learnt at school?
    - Why are the reasons for this?
- Are you aware of any hobbies, interests of extra-curricular activities that students with different abilities in track 3 have?
    - Do you feel they have time to relax and pursue their interests in / out of school?

Future aspirations

- Do you see a trend in choice of subjects among students with different abilities in track 3?
- What career aspirations do students with different abilities in track 3 have?
    - Are their career aspirations in line with the expectations of their parents and teachers?

Concluding questions

- Is there anything else you would like to add on the learning experiences of students with different abilities in track 3.

Appendix 10 – Data code books

Interviews_Average students

Codes

Name	Description	Files	References
Benefits of tracks for average learners		1	1
Career aspirations		1	1
Challenges encountered by average learners		1	2
Challenges of track system	(not considered – not related to learning experiences of average students)	1	3
Challenging subjects for average learners		1	1
Choice of subjects		1	1
Coping mechanisms by average learners		1	1
Experiences in other tracks	(not considered – not related to learning experiences of average students)	1	1
Family expectations not in line		1	2
Family pressures		1	1
Finding time for leisure activities		1	1
High expectations		1	1
Hobbies and talents		1	1
Lack of support from teachers		1	1
Manifestations of family support		1	2
Motivation		1	3

Name	Description	Files	References
No role model		1	1
Positive school experiences		1	3
Positive social context in class		1	2
Preferred school activities		1	1
Reasons for choice of subjects		1	1
Selective attention given to subjects		1	1
Social relations not affected by track system		1	1
Strategies for learning by average peers		1	4
Strategies for teaching		1	2
Suggestions to improve track system		1	2
Support services useful		1	3
Supportive teachers		1	1
Unpopular school activities		1	1

Interviews_Gifted students

Codes

Name	Description	Files	References
Acceptance of high expectations		2	4
Benefits of tracks for different abilities		2	4
Benefits of tracks for G&T	(not considered – not related to learning experiences of G&T)	3	7
Career aspirations		3	5
Challenges encountered by G&T in learning	The challenges encountered and ways they mitigated them.	3	10
Challenges of track system	(not considered – not related to learning experiences of G&T)	2	4
Choice of subjects		3	5
Competition between G&T		2	3
Coping mechanisms by G&T		3	6
Differential treatment by teachers with classes of different abilities	Description of differential treatment by teachers with the different classes of different abilities	1	1
Equal attention given to all subjects		3	3
Family expectations in line with G&T		2	2
Finding time for leisure activities		3	5
Finds difficulty to make friends	(not considered – only 1 G&T experienced this and recently changed)	1	1
Geared for examinations		3	8
Hobbies & talents		3	4

Name	Description	Files	References
Lack of support from teachers	(not considered – only 1 teacher did not support during quarantine)	1	2
Learning at a faster pace		3	5
Manifestations of family support		3	4
Motivation	Replies that infer to their motivation and perseverance.	3	22
No difficulty in making friends		2	3
No pressures from family		3	4
No role models		3	3
Positive school experiences		3	12
Positive social context in class		3	9
Preferred school activities		3	10
Reasons for choice of subjects		3	4
Social relations affected by track system		2	4
Social relations not affected by track system		2	3
Strategies for learning by G&T	Methods G&T find useful to learn and understand	3	13
Strategies for teaching		3	10
Support services not utilised		3	3
Support services of use to peers	(not considered – not related to learning experience of G&T)	1	1
Supportive families		3	8
Supportive teachers		2	12

Name	Description	Files	References
Unpopular school activities	School activities that are least popular	2	3
Ways other student learn	This is from the perception of the G&T students - as described by G&T (not considered – deals with students of lower ability not learning experiences of G&T)	1	1
Well organised track system		3	4
Well prepared teachers		3	10

Interviews_Parents of average students

Codes

Name	Description	Files	References
Age		3	3
Benefits of tracks for different abilities	(not considered – not related to learning experiences of average students)	2	4
Challenges encountered by average students in learning		3	5
Challenges of the track system	(not considered – not referring to their own	2	3
Choice of subjects		3	8
Family expectations not in line		3	8
Family pressures		2	6
Finding time for leisure activities		3	4
Hobbies and talents		2	7
Lack of motivation		2	10
Lack of support from teachers	(not considered – not related to learning experiences of average students per se but related to rushed Parents Day due to time constraints)	1	1
Manifestations of family support		3	10
No role model		1	1
Number of siblings		3	3
Parent occupation		3	4
Parent's opinion on tracks		3	9
Positive school experience		3	7

Name	Description	Files	References
Positive social context in class		3	5
Preferred school activities		3	8
Selective attention given to subjects		3	3
Social relations not affected by the track system		3	4
Strategies for learning by average learners		3	11
Strategies for teaching		1	1
Support services not utilised		2	2
Support services utilised		1	1
Supportive teachers		2	3
Tracks beneficial for their average son_daughter		2	3
Understanding parents		3	3
Unpopular school activities		1	8

Interviews_Parents of G&T students

Codes

Name	Description	Files	References
Age		3	3
Benefits of tracks for different abilities	(not considered – not related to learning experiences of gifted students)	3	6
Challenges encountered by G&T in learning		3	9
Challenges of track system	(not considered – only related to time during Covid)	2	2
Choice of subjects		3	5
Competition between G&T		1	2
Equal attention given to all subjects		3	3
Family expectations in line with G&T		3	7
Finding time for leisure activities		3	7
Geared for examinations		3	6
Hobbies and talents		3	5
Lack of support from teachers	(not considered – opinion of a mother on two teachers and not shared by her daughter)	1	2
Learning at a faster pace		2	3
Manifestations of family support		3	20
Motivation		3	17
Number of siblings		3	3
Parent occupation		3	4
Positive school experience		3	8

Name	Description	Files	References
Positive social context in class		2	2
Preferred school activities		2	2
Social relations not affected by the track system		3	3
Strategies for learning by G&T		3	6
Strategies for teaching		2	2
Support services not utilised		2	2
Support services utilised		1	1
Supportive teachers		2	3
Tracks beneficial for thier son_daughter		3	4
Understanding parents		2	6
Well organised track system		3	4
Well prepared teachers		2	5

Interviews_Teachers

Codes

Name	Description	Files	References
Age		4	4
Benefits of tracks for different abilities		4	7
Career aspirations		4	5
Challenges in different classes		4	18
Choice of subjects		4	5
Competition in highest track		3	10
Differential treatment by teachers with classes of different abilities		2	8
Equal importance given to all subjects		1	1
Finding time for leisure activities		4	6
G&T geared for exams		4	10
G&T learning at a faster rate		3	6
Hobbies and talents		4	5
Motivation exhibited by gifted students		3	12
Opinion on track system		4	10
Parent expectations		4	6
Positive social relations in G&T class		1	2
Preferred approaches to learning something new		4	5

Name	Description	Files	References
Preferred school activities		4	5
Pressure on teachers		4	19
Selective attention to subjects		3	3
Sex		4	4
Social relations affected by family status		1	1
Social relations affected by the track system		3	5
Specific challenges encountered in G&T class		4	18
Specific strategies used with G&T		4	9
Strategies used in class		4	20
Strategies used with lower tracks	(not considered – not related to learning experiences of gifted or average students)	3	6
Students' reactions to difficulties in learning		4	5
Subjects taught		4	4
Support given by teacher		4	11
Supportive families		4	6
Teach tracks		4	6
Teacher expectations		4	11
Unpopular school activities		1	1
Years of teaching		3	3