Final Report

Research on underachievement and the reversal of underachievement in gifted students

Reversing and preventing underachievement in gifted students viewed through the lens of lived experience
JODI LAMANNA

UNIVERSITY OF WOLLONGONG |

Final report

Reversing and preventing underachievement in gifted students viewed through the lens of lived experience

Jodi Lamanna

Supervisors:

Professor Wilma Vialle

Dr Catherine Wormald

University of Wollongong

School of Education

June 2022

Abstract

The purpose of this research was to investigate the phenomenon of underachievement in gifted students. This research was viewed through the lens of lived experience and underpinned by Bronfenbrenner's (1979) Ecological Systems Theory which recognises the importance of linked systems in society.

The research literature showed that underachievement was a prevalent issue for gifted students (Figg et al., 2012; Siegle, 2013) and that appropriate interventions needed to be in place to mitigate the disadvantage caused by underachievement. Factors that contributed to underachievement included inappropriate curriculum (Olenchak, 2001; Rimm & Lovance, 1992b), poor self-regulation (Baum et al., 1995a), and boredom (Bennett-Rappell & Northcote, 2016; Kanevsky & Keighley, 2003). Factors that reversed underachievement included appropriate curriculum (Baum et al., 1995a; Bennett-Rappell & Northcote, 2016), peer influence (Davis & Rimm, 1994; Gross, 2006; Hébert, 1998b) and a positive teacher connection (Coleman et al., 2015; Emerick, 1992; Grantham, 2004).

To address the issue of underachievement in gifted students, the research comprised six qualitative case studies of students in NSW who were gifted and had experienced underachievement. These students were interviewed twice and were observed in the classroom (or equivalent). Their parents were interviewed and completed a questionnaire. In the classroom observations, the teachers were interviewed regarding what was observed.

The second phase of data collection involved a qualitative survey that was sent to schools for teaching staff to complete. The survey was online and anonymous and

sought to investigate teacher knowledge of giftedness, underachievement and the reversal of underachievement.

Whilst parents and a number of teachers had a good understanding of the needs of gifted students, the findings from the data reflected that in order to reverse underachievement there was a need for a differentiated curriculum, and positive teacher-student relationships. It is also recommended that teachers – both pre-service and in-service – have access to ongoing quality training in gifted education. This training should encompass the academic, social and emotional needs of gifted students, and provide strategies on how to prevent and reverse underachievement. Through this training, teachers are more likely to effectively differentiate lessons within the classroom through academic acceleration, curriculum compacting, and student-led learning.

Acknowledgements

This project could not have been completed without the help of key people and groups:

My academic supervisors Professor Wilma Vialle and Dr Catherine Wormald who supported me through the PhD journey.

My family who patiently followed my research journey.

The Department of Education (SERAP), Sydney Catholic Schools, and the Human Research Ethics Committee.

Lastly, and with much gratitude, the case study participants and their families who spent considerable time sharing their lives, and for the schools and teachers who participated in the survey. This research is because of you and for you.

Overview of recommendations

1. Provide an appropriately challenging curriculum through:

   a. Differentiation

   b. Grade acceleration

   c. Access to above-grade content

   d. Avoidance of repetition

   e. Student-led learning

2. Educate teachers about giftedness

   a. During pre-service and in-service

   b. Include

      i. definitions of giftedness,

      ii. identification of gifted students in the classroom, and

      iii. recognition of the social, emotional and academic needs of gifted students

      iv. training about twice-exceptionality

      v. multiple methods of assessment and pedagogy

Table of Contents

1. Introduction

1.1 The problem

Gifted students are students possessing outstanding natural abilities (Gagné, 2010) and who have unique intellectual, social and emotional needs (Cross et al., 2019; Miraca Gross, 2004). If these unique needs are not recognised and met in the classroom, underachievement is likely to occur (Bennett-Rappell & Northcote, 2016; M. Gross, 2006). The Australian Senate Committee (Commonwealth of Australia, 2001) confirmed that gifted students are among the most disadvantaged educational groups due to the lack of resources and lack of awareness of giftedness in schools. This disadvantage contributes to underachievement which undermines the potential of gifted students, contributing to a loss to society (Commonwealth of Australia, 2001). Underachievement often means that a gifted student is not identified in the classroom, thus perpetuating the cycle as appropriate strategies are not put in place to reverse or prevent underachievement.

It was also found that no Australian literature specifically investigated the reversal and prevention of gifted underachievement through the lens of lived experience. The gap in the literature supports the need for further research in the area of gifted underachieving students, with the focus on lived experience.

In order to support gifted students to reach their potential, this research seeks to amplify the voice of gifted students who have experienced academic underachievement. The students can establish what factors contribute to underachievement, and importantly, what factors reverse underachievement. This knowledge base is an important resource for parents and teachers.

1.2 Significance of the research

Research into underachievement in gifted students is crucial because it provides researchers, educators, and parents with the knowledge of what causes underachievement in gifted students. Understanding the factors that contribute to underachievement is an important step in firstly recognising gifted underachievement, and secondly, providing appropriate strategies to reverse underachievement in gifted students.

1.3 The study aim and research questions

This study aimed to investigate underachievement in gifted students, specifically viewed through the lens of lived experience. The research was specific to the Australian context and data collection occurred within NSW, Australia. The research questions for the study were as follows:

- What factors contribute to gifted underachievement?
- What are the factors that reverse gifted underachievement?
- What can be done to prevent gifted underachievement?

Furthermore, a subset of questions emerged from the three main questions and these questions were:

- What behaviours do teachers consider to identify giftedness?
- How do teachers identify academic underachievement?
- What strategies do teachers use or recommend to reverse underachievement?

2. Review of the literature

Research has shown that an estimated 40% of gifted students could be identified as underachievers (Figg, Rogers, McCormick, & Low, 2012; Siegle, 2013) and that without intervention underachieving gifted students were likely to continue to underachieve in adult life (Richer, 2012). This is a cause for concern for parents and educators as the effects of underachievement impacts students' self-esteem and academic progress (Grantham, 2004; Kanevsky & Keighley, 2003; Walters, 2008).

2.1 Giftedness

Those who are identified as gifted are not homogeneous (Kennedy & Farley, 2018) and it could be argued that definitions of giftedness should reflect this diversity (Carman, 2013; Vald & Valdes, 2003). Others (Ford, 2018; Matthews, 2018) affirmed that giftedness eluded a single definition and were concerned that the lack of consensus regarding a definition of giftedness had implications for identifying students as gifted, providing appropriate programs, and determining how assessment should occur.

2.2 Underachievement

Researchers have agreed that underachievement can be defined as a significant discrepancy between expected achievement and actual achievement (Davis & Rimm, 2004; Desmet, Pereira, & Peterson, 2020; Figg et al., 2012; Frick, 1991; Hately & Townend, 2020; Landis & Reschly, 2013; Reis & McCoach, 2000; Ritchotte, 2014; Siegle & McCoach, 2018). Expected achievement was measured through the use of standardised tests and cognitive tests (such as an IQ test) and potential was determined by comparing test scores with school grades (Ford, 2018). Accepting this definition of underachievement implied that the methods of measuring performance – such as IQ and standardised tests – were accurate and relevant

across all cultures and socioeconomic (SES) groups. However, these tests have been shown to be problematic due to cultural bias and should not be the sole basis for determining performance or ability (Hertzog, Mun, DuRuz, & Holliday, 2018; Liu & Waller, 2018; Rimm, 1997; White, Graham, & Blaas, 2018; Whitmore, 1980).

2.3 Reversal of underachievement

Reversal of academic underachievement in this study was defined as the realignment of potential and performance after a period of chronic underachievement. This definition encompassed re-engagement in learning (Bennett-Rappell & Northcote, 2016; Hébert & Olenchak, 2000), intrinsic motivation (Baum, Renzulli, & Hébert, 1995a; Hébert, 1998a; Richer, 2012), and school attendance (Landis & Reschly, 2013; Olenchak, 2001). In some studies, the reversal of academic underachievement was only credited if the student had 12 consecutive months or more showing the reversal of underachievement (Emerick, 1992; Olenchak, 2001; Peterson, 2001b). Within this study, reversal of underachievement was acknowledged for its presence, not its longevity, as it was understood that reversal of underachievement could fluctuate depending on the school environment, stage of learning, and stage of child development.

3. Method

The purpose of the research was to address academic underachievement and the reversal of underachievement in gifted students. Addressing academic underachievement was important because it directly affected the social, emotional and academic outcomes for the student (Baum et al., 1995a; Grantham, 2004; M. Gross, 2006).

3.1 Ethics

Permission was gained from the Human Resources Ethics Committee at the University of Wollongong. Permission to access NSW departmental schools was granted through the Education Department's process for conducting research in government schools (SERAP). Additionally, permission was granted from the Sydney Catholic Schools to conduct research.

3.2 Research design

A two-phase qualitative design was selected to investigate the lived experience of giftedness and underachievement. Phase one used multiple case studies of students who were gifted, who underachieved and who reversed the underachievement. Phase two of the research utilised a qualitative questionnaire to investigate teachers' knowledge and skills regarding giftedness, underachievement and the reversal of underachievement.

3.3 Phase one

In phase one, six gifted students were chosen through purposeful sampling (Creswell, 2013) to be part of research that addressed the questions regarding giftedness, academic underachievement, and the reversal of gifted underachievement. This number of participants

allowed for diversity and the possibility of attrition from the research. The sample included students from both primary and secondary schools within NSW and comprised both male and

All data from the questionnaires, interviews, observations and documents such as work samples, school reports, and IQ assessments were transferred to Nvivo 12Plus where coding was conducted in a line-by-line format and guided by the research questions.

3.4 Phase two

The target population for the qualitative teacher questionnaire was primary and secondary teachers in New South Wales schools. The schools included both primary and secondary schools, Government, Catholic and Independent schools across diverse socioeconomic backgrounds and geographical locations.

The teacher survey was created to investigate teacher understanding of giftedness, underachievement, and the reversal of underachievement. School principals (n=707) in all geographic regions of NSW were invited to participate in the anonymous survey along with their teaching staff. One hundred and forty participants accessed the survey, although ten participants did not attempt the survey beyond the opening page, leaving 130 participants completing the bulk of the survey.

Of the teachers who completed the questionnaire, 78% of participants were secondary teachers (n=102) and 22% of participants were primary teachers (n=28). Of the 130 participants, 52% of teachers had completed training in gifted education and of those who had training, 16% completed training at the undergraduate level (n=11) and 27% of teachers at the postgraduate level (n=19). The remainder of teachers completed training in gifted education through professional development (n=55%).

The data was coded line-by-line, aligning responses within the framework of the research questions regarding giftedness, underachievement and the reversal of underachievement. These themes highlighted teacher attitude toward giftedness and underachievement and included teacher strategies suggested to reverse and prevent underachievement.

3.5 Summary

The dual-phase method allowed for data collection from a broad range of sources. Within this, phase one of the research informed phase two. Validity and reliability were accounted for by acknowledging their importance in the research and through multiple methods in the data collection. Ethics were underpinned by person-oriented research ethics (Cascio & Racine, 2018) which supported student voice and the lens of lived experience.

4. Phase 1 findings

Case study participants were asked to choose their own pseudonyms. The pseudonyms are Andromeda, Bella, Matt, Ozzie, Unknown Guy, and Kdog. During the data collection parents were involved in sharing information and were present during the interviews with their child. The themes from the findings were related to research questions (RQ) one and two, which explored the factors contributing to gifted underachievement (RQ1) and the factors that reverse gifted underachievement (RQ2).

The findings from the case studies were based on a series of interviews, a questionnaire, classroom observations, and document collection.

4.1 Profiles of case study participants

4.1.1 Andromeda

Code name: Andromeda

Age: 18

Gender: Male

Year at school: Bridging course to university (HSC equivalent)

Cognitive assessment:

Stanford-Binet Intelligence Scale: Fifth Edition (SB5) – Gifted Composite Score of 99.6th percentile.

Interests and hobbies:

Reading, mythology, role-play games such as Dungeons and Dragons, watching documentaries, doing jigsaw puzzles, building Lego, and writing stories online.

Areas of strength:

Within the cognitive assessment report, Andromeda performed highly in all areas with visual-spatial processing a key strength (performing better than 99.9% of age peers).

Quote: After medication and adjustment of learning support:

"I mean, nowadays it's, I'm still trying my hardest because I'm determined to try and succeed in it but it's not like I have to, I don't want to say it's not like I have to try as hard, but it's not like I'm trying to force myself into something that I can't do anymore." (Andromeda)

4.1.2 Matt

Code name: Matt

Age at time of first interview: 8

Gender: Male

Year at school: 3

Cognitive assessment:

Stanford-Binet Intelligence Scale: Fifth Edition (SB5) – 99.9[th] percentile of cognitive ability.

Interests and hobbies:

Pokemon, video games, Lego, sport and cricket, maths, reading books, dogs, dominos, Beyblades, friends, music, cooking, sleeping.

Areas of strength:

Mathematics is a particular area of interest, however cognitive testing showed consistent strengths across all of the test areas (Fluid Reasoning, Knowledge, Quantitative Reasoning, Visual-Spatial Processing, Working Memory).

Quote: "I think differentiation is the key" (Matt's mother)

4.1.3 Bella

Name: Bella

Age: 11

Gender: Female

Year at school: 6

Cognitive assessment:

WISC-V: 90th percentile of ability

Interests and hobbies:

Art, coding, netball, basketball, YouTube

Areas of strength:

Fluid Reasoning was reported to be the greatest area of strength (97th percentile)

Twice exceptionalities:

Dyslexia

ADHD predominantly inattentive type

Quote:

"If I could, I'd re-learn every lesson just so I could be a little bit better" (Bella).

4.1.4 Ozzie

Code name: Ozzie

Age: 11

Gender: Male

Year at school: 6

Cognitive assessment:

None conducted.

Interests and hobbies:

Playing soccer and baseball. Mathematics. Drawing and architecture. Playing PS4.

Areas of strength:

Public speaking and debating, mathematics and sport.

Quote: "I just don't like sitting still" (Ozzie).

4.1.5 Unknown Guy

Code name: Unknown Guy

Age: 8

Gender: Male

Year at school: 5

Cognitive assessment:

WPPSI-IV: 3 years 11 months. FSIQ = 148 = 99.9%

WISC-IV: 6 years 2 months. FSIQ = 151 = 99.9%

WIAT: 6 years 2 months. Equal to or better than 99.9% of age peers

Interests and hobbies:

Robotics, coding, maths, reading, Lego, clarinet, drama, Taekwondo, soccer. Also playing Minecraft and Stampede and playing with pets.

Areas of strength:

Verbal comprehension and working memory were in the very superior range of testing in the WISC assessment.

Unknown Guy's mother also said that his strengths were his ability to observe, connect and understand things.

Quote:

"Not really anyone at school's helping me, like pretty much no one at school understands me" (Unknown Guy).

4.1.6 Kdog

Code name: Kdog

Age: 11

Gender: Male

Year at school: 6

Cognitive assessment:

Dyslexia assessment (8 years old, year 3):

    Results indicate that dyslexia was "severe in extent" (dyslexia assessment)

YORK assessment (Year 6):

    Comprehension: 97th percentile

    Single word reading: 2nd percentile

Interests and hobbies:

"Patting my dog, watching YouTube and using my unicycle…gaming" (Kdog). Also camping, mountain bike riding, and doing science experiments.

Areas of strength:

Verbal ability, science and mathematics.

Quote:

"I have an extreme knowledge of science which gets annoying because all the stuff in school is not interesting" (Kdog).

4.2 Case study summary

Each case study participant was interviewed twice, was observed in the classroom or an equivalent, and had parental input. The research was supported by a rich data set which was appropriate for the case study format. Each of the case study participants were able to express their own view on the lived experience of giftedness and underachievement.

5. Phase 2 findings

This section highlights phase two of data collection which explores teacher understanding of giftedness, underachievement, and strategies to reverse underachievement. Teacher knowledge of these concepts was extrapolated from an anonymous survey sent to school principals throughout NSW.

The teacher survey was created to investigate teacher understanding of giftedness, underachievement, and the reversal of underachievement. School principals (n=707) in all geographic regions of NSW were invited to participate in the anonymous survey along with their teaching staff. One hundred and forty participants accessed the survey, although ten participants did not attempt the survey beyond the opening page, leaving 130 participants completing the bulk of the survey.

The types of schools represented by the participants are as follows. Teachers employed at government schools were predominant, comprising 58% of the responses, with those at Independent schools accounted for 38% of the responses. Teachers from Catholic schools contributed two percent of the responses as did teachers from other types of schools. Additionally, 65% of teachers were in the metropolitan area (Greater Sydney), while regional NSW teachers had a 28% participation rate. Rural teachers in NSW contributed to 6% of responses. Regional and rural labels were self-selected by the participants to best describe their school region.

5.1 Resources and strategies

Teachers who responded to the survey indicated that there were resources or strategies that they would use to reverse underachievement in gifted students. These responses were

grouped into the themes of differentiation, teacher-student connection, assessment, support, and socialisation.

5.2 Summary

The findings of phase two revealed that teachers who responded to the survey had mixed understandings of giftedness, underachievement, and the reversal of underachievement. To address the varied levels of awareness of giftedness, underachievement and reversal of underachievement, it was recommended that professional development in gifted education is provided in a systematic and frequent manner, throughout the lifespan of teaching to include both pre-service and in-service professional development.

6. Discussion and Recommendations

6.1 Discussion of phase one and two

The present research was specific to the Australian education context, in particular from the NSW region of Australia. This geographical focus was important as findings and recommendations from the research can be implemented in the Australian context. The research focused on the lived experience of gifted underachievement, viewed through the perspectives of students, parents and teachers. Consistent themes across the case studies and the teacher survey included individualised strategies and differentiation as a means for reversing underachievement; providing a positive teacher-student relationship; and the need for teacher training in gifted education. Many of the findings aligned with international research, for example, the need for a challenging and appropriate curriculum. Additional themes arising from this research included alternative schooling options and the use of medication where appropriate.

The following recommendations are designed to allow gifted students to achieve their academic potential and thereby preventing underachievement. These recommendations address the need for training for teachers in gifted education so that they can know their students and how they learn (AITSL, 2017) and meet students' needs. The recommendations work best when they are implemented through a whole-of-school approach, therefore it is important to have a long-term plan so that the needs of gifted students are met throughout their entire schooling (Bronfenbrenner, 1979; NSW Government Education, 2019).

6.2 Recommendations

6.2.1 Provide an appropriately challenging and relevant curriculum

An appropriate curriculum requires several factors including differentiation, grade acceleration, exposure to above grade level curriculum, avoidance of repetition through an individualised learning program, and implementation of rest breaks.

Differentiation can be achieved through the implementation of various teaching models (Maker, 1982; Tomlinson, 2005; VanTassel-Baska, 2018a). Aspects that need to be to differentiated include the content of the curriculum, the process or the way the curriculum is presented, the product the student produces which demonstrates their knowledge and understanding of the curriculum and the student's learning environment (Maker, 1982). Differentiation is effective when it is contextualised to the individual student's needs.

Similarly, early entry to school and grade acceleration are forms of differentiation that ensure gifted students receive an appropriate curriculum (Vialle & Rogers, 2013). Early entry is the provision of entering school earlier than their age-peers (NSW Department of Education and Training, 2004). This is appropriate for students who show readiness for the kindergarten curriculum whilst still in pre-school. Grade acceleration is a provision that allows a gifted student the opportunity to be placed with peers of similar ability (Colangelo et al., 2010; Rimm & Lovance, 1992b). This is generally utilised when a student has shown mastery of the concepts that would be taught to their age peers. Both early entry and grade acceleration need to be carefully considered to ensure student readiness and that it is the appropriate strategy.

A challenging and appropriate curriculum can be implemented through access to above grade level content in the regular classroom, in addition to curriculum compacting and grade acceleration. Pre-testing confirms what level is appropriate for the gifted student, and the results of the pre-test can be factored into the lesson plan. The topic will be the same as their

age-based peers, however, the depth and complexity will differ. Not only do gifted students require a curriculum that has greater depth and complexity they also require less repetition to learn the content (NSW Government Education, 2020), This means that gifted students can move on to the next concept and learn at a pace that suits their learning needs.

An appropriate curriculum can be guided by an individual learning plan. An individual learning plan allows gifted students to learn at their own pace. Similarly, autonomous learning can be achieved through individual learning projects and self-initiated learning. Individualised learning allows for flexibility and creativity in lesson content and structure.

6.2.2 Educate teachers about giftedness

The findings from the teacher survey on reversing and preventing underachievement in gifted students revealed that teachers had a diverse understanding of giftedness. In the same way, teachers' understanding of underachievement and strategies to reverse underachievement was mixed. Parent and student participants in the case studies recognised that some teachers had a limited understanding of giftedness. This highlights the need for teachers to be trained in gifted education. In light of these findings, the recommendation is that all pre-service and current teachers receive ongoing professional development in gifted education. Professional development in gifted education creates an awareness of the needs of gifted students.

The professional development would cover definitions of giftedness, identification of gifted students in the classroom, and recognition of the social, emotional and academic needs of gifted students. Professional development would create an awareness of methods for flexible assessment, a differentiated curriculum, and focus on student strengths. Similarly, professional development in twice exceptionality would highlight the characteristics of twice exceptionality, and that curriculum be presented in a format that works with the student's strengths.

In Australia, training in gifted education at university is not mandatory for preservice teachers except at UNSW which is currently the only university in NSW to include a compulsory unit on gifted education. Where gifted education subjects are available at other universities, they are generally offered only as an elective. As a result, pre-service teachers are largely unaware of what giftedness is and why it is important to identify gifted students in the classroom. However, when training in giftedness is provided teachers have been shown to be aware of strategies to implement for gifted students (Fraser-Seeto, Howard, & Woodcock, 2016; Kronborg, 2018).

6.3 Future research

Future research could build on the current findings of the lived experience of gifted underachieving students within the NSW school system. This could be done through a replication of the teacher survey across all Australian states and territories with a particular focus on the difference in responses from schools that have an active and informed gifted education program and schools that do not. This is important because each state in Australia has its own policy on giftedness and professional development and there may be gaps in understanding between each state. The broadening of the current research would provide a larger view of the state of gifted education within Australian schools, and similarly, whether the needs of gifted students are met within the classroom.

6.4 Conclusion

Finally, ongoing research into the lived experience of gifted students will highlight the issues that gifted students and their families experience throughout the schooling years. These data, in turn, need to inform government policy on mandating professional development in gifted

education for teachers as a means of meeting the needs of gifted students. Funding needs to be allocated from both federal and state governments to ensure that all teachers have access to quality Professional Development and that funding is in place in all schools in order to provide resources for gifted students. It is important that the resources are contextualised to the school and individual students as the research shows that gifted students have individual needs and are not a homogeneous group.

This research demonstrates the importance of identifying giftedness, underachievement, and strategies for reversal of underachievement as they lead to students fulfilling their potential. Further research will build on an understanding of these issues and help prevent underachievement in the gifted population.

References

AITSL. (2017). Australian Professional Standards for Teachers. Retrieved from
        https://www.aitsl.edu.au/teach/standards

Baum, S., Renzulli, J., & Hébert, T. (1995a). Reversing Underachievement: Creative Productivity as a
        Systematic Intervention. *Gifted Child Quarterly, 39*(4), 224-235.

Bennett-Rappell, H., & Northcote, M. (2016). Underachieving Gifted Students: Two Case Studies.
        Issues in Educational Research, 26(3), 407-430.

Bronfenbrenner, U. (1979). *The Ecology of Human Development.* Cambridge, Massachusetts:
        Harvard University Press.

Carman, C. (2013). Comparing Apples and Oranges: Fifteen years of Definitions of Giftedness in
        Research. *Journal of Advanced Academics, 24*(1), 52-70.

Cascio, M., & Racine, R. (2018). Person-oriented research ethics: integrating relational and everyday
        ethics in research. *Accountability in Research: Policies and Quality Assurance, 25*(3), 170-197.

Colangelo, N., Assouline, S., Marron, M., Castellano, J., Clinkenbeard, P., Rogers, K., . . . Smith, D.
        (2010). Guidelines for Developing an Academic Acceleration Policy. *Journal of Advanced
        Academics, 21*(2), 180-203. Retrieved from
        http://ezproxy.uow.edu.au/login?url=https://search.ebscohost.com/login.aspx?direct=true
        &db=eric&AN=EJ880578&site=eds-live

http://journals.prufrock.com/IJP/c.abs/journal-of-advanced-
        academics/volume21/issue2/article1001

Commonwealth of Australia. (2001). *Education of gifted and talented children*. Retrieved from
        https://www.aph.gov.au/binaries/hansard/senate/commttee/s4843.pdf

Creswell, J. (2013). *Qualitative Inquiry and Research Design: Choosing Among Five Approaches (3rd
        edition)*: SAGE Publications, Inc.

Cross, J. R., Vaughn, C. T., Mammadov, S., Cross, T. L., Kim, M., O'Reilly, C., . . . Hymer, B. (2019). A
        Cross-Cultural Study of the Social Experience of Giftedness. *Roeper Review, 41*(4), 224-242.
        doi:10.1080/02783193.2019.1661052

Davis, G., & Rimm, S. (2004). *Education of the gifted and talented* (5th edition ed.): Pearson
        Education, Inc.

Desmet, O., Pereira, N., & Peterson, J. (2020). Telling a tale: How underachievement develops in
        gifted girls. *Gifted Child Quarterly, 64*(2), 85-99.

Emerick, L. (1992). Academic underachievement among the gifted: Students' perceptions of factors
        that reverse the pattern. *Gifted Child Quarterly, 36*(3), 140-146.

Figg, S., Rogers, K., McCormick, J., & Low, R. (2012). Differentiation low performance of the gifted
        learner: Achieving, underachieving, and selective consuming students. *Journal of Advanced
        Academics, 21*(1), 53-71.

Ford, D. (2018). Gifted and Talented Education: History, Issues, and Recommendations. In S. I. E. S.-
        D. Pfeiffer, Elizabeth (Ed); Foley-Nicpon, Megan (Ed) (Ed.), *APA handbook of giftedness and
        talent*: American Psychological Association.

Fraser-Seeto, K., Howard, S., & Woodcock, S. (2016). Preparation for teaching gifted students: An
        updated investigation in university offerings in NSW. *Australasian Journal of Gifted
        Education, 25*(1), 58-65.

Frick, P., Kamphaus, R., Lahey, B., Loeber, R., Christ, M., Hart, E., & Tannenbaum, L. (1991). Academic
        Underachievement and the Disruptive Behavior Disorders. *Journal of Consulting and Clinical
        Psychology, 59*(2), 289-294.

Gagné, F. (2010). Motivation within the DMGT 2.0 framework. *High Ability Studies, 21*(2), 81-99.

Grantham, T. (2004). Rocky Jones: Case Study of a High-Achieving Black Male's Motivation to Participate in Gifted Classes. *Roeper Review, 26*(4), 208-215.

Gross, M. (2004). *Exceptionally gifted children* (2nd ed.). New York: RoutledgeFalmer.

Gross, M. (2006). Exceptionally Gifted Children: Long-Term Outcomes of Academic Acceleration and Nonacceleration. *Journal for the Education of the Gifted, 29(4),* 404-429,485-486. Retrieved from
http://ezproxy.uow.edu.au/login?url=https://search.proquest.com/docview/222271840?accountid=15112

http://EY9FF7JB6L.search.serialssolutions.com?ctx_ver=Z39.88-2004&ctx_enc=info:ofi/enc:UTF-8&rfr_id=info:sid/ProQ%3Acentral&rft_val_fmt=info:ofi/fmt:kev:mtx:journal&rft.genre=article&rft.jtitle=Journal+for+the+Education+of+the+Gifted&rft.atitle=Exceptionally+Gifted+Children%3A+Long-Term+Outcomes+of+Academic+Acceleration+and+Nonacceleration&rft.au=Gross%2C+Miraca+U+M&rft.aulast=Gross&rft.aufirst=Miraca+U&rft.date=2006-07-01&rft.volume=29&rft.issue=4&rft.spage=404&rft.isbn=&rft.btitle=&rft.title=Journal+for+the+Education+of+the+Gifted&rft.issn=01623532&rft_id=info:doi/

Hately, S., & Townend, G. (2020). A qualitative meta-analysis of research into the underachievement of gifted boys. *The Australasian Journal of Gifted Education, 29*(1), 6-22.

Hébert, T. (1998a). Gifted Black Males in an Urban High School: Factors That Influence Achievement and Underachievement. *Journal for the Education of the Gifted, 21*(4), 385-414.

Hébert, T., & Olenchak, R. (2000). Mentors for Gifted Underachieving Males: Developing Potential and Realizing Promise. *Gifted Child Quarterly, 44*(3), 196-207.

Hertzog, N., Mun, R., DuRuz, B., & Holliday, A. (2018). Identification of Strengths and Talents in Young Children. In S. I. E. S.-D. Pfeiffer, Elizabeth (Ed); Foley-Nicpon, Megan (Ed) (Ed.), *APA handbook of giftedness and talent* (pp. 301-316): American Psychological Association.

Kanevsky, L., & Keighley, T. (2003). To Produce or Not to Produce? Understanding Boredom and the Honor in Underachievement. *Roeper Review, 26*(1), 20-28.

Kennedy, K., & Farley, J. (2018). Counseling Gifted Students: School-Based Considerations and Strategies. *International Electronic Journal of Elementary Education*(3), 361. doi:10.26822/iejee.2018336194

Kronborg, L. (2018). Gifted Education in Australia and New Zealand. In S. Pfeiffer, Shaunessy-Dedrick, Elizabeth, Foley-Nicpon, Megan (Ed.), *APA handbook of giftedness and talent* (pp. 85-96): American Psychological Association.

Landis, R., & Reschly, A. (2013). Reexamining Gifted Underachievement and Dropout Through the Lens of Student Engagement. *Journal for the Education of the Gifted, 36*(2), 220-249.

Liu, W., & Waller, L. (2018). Identifying and Educating Underrepresented Gifted Students. In S. I. E. S.-D. Pfeiffer, Elizabeth (Ed); Foley-Nicpon, Megan (Ed) (Ed.), *APA handbook of giftedness and talent* (pp. 417-431): American Psychological Association.

Maker, J. (1982). *Curriculum development for the gifted*. Austin, Texas: Pro-Ed.

Matthews, M., & Peters, S. (2018). Methods to Increase the Identification Rate of Students from Traditionally Underrepresented Populations for Gifted Services. In S. I. E. S.-D. Pfeiffer, Elizabeth (Ed); Foley-Nicpon, Megan (Ed) (Ed.), *APA handbook of giftedness and talent* (pp. 317-331): American Psychological Association.

NSW Department of Education and Training. (2004). *Policy and implementation strategies for the education of gifted and talented students*. Retrieved from
https://policies.education.nsw.gov.au/policy-library/associated-documents/polgdl.pdf

NSW Government Education. (2019). *High Potential and Gifted Education Policy*. Retrieved from
https://education.nsw.gov.au/teaching-and-learning/high-potential-and-gifted-education/about-the-policy/high-potential-and-gifted-education-policy#PDF0

NSW Government Education. (2020). *Revisiting Gifted Education*. Retrieved from https://education.nsw.gov.au/teaching-and-learning/high-potential-and-gifted-education/research

Olenchak, R. (2001). Lessons learned from gifted children about differentiation. *The Teacher Educator, 36*(3), 185-198. Retrieved from http://ezproxy.uow.edu.au/login?url=https://search.proquest.com/docview/220625291?accountid=15112

http://EY9FF7JB6L.search.serialssolutions.com?ctx_ver=Z39.88-2004&ctx_enc=info:ofi/enc:UTF-8&rfr_id=info:sid/ProQ%3Aeducation&rft_val_fmt=info:ofi/fmt:kev:mtx:journal&rft.genre=article&rft.jtitle=The+Teacher+Educator&rft.atitle=Lessons+learned+from+gifted+children+about+differentiation&rft.au=Olenchak%2C+F+Richard&rft.aulast=Olenchak&rft.aufirst=F&rft.date=2001-01-01&rft.volume=36&rft.issue=3&rft.spage=185&rft.isbn=&rft.btitle=&rft.title=The+Teacher+Educator&rft.issn=08878730&rft_id=info:doi/

Peterson, J. (2001b). Successful adults who were once adolescent underachievers. *Gifted Child Quarterly, 45*(4), 236-249.

Reis, S., & McCoach, B. (2000). The Underachievement of Gifted Students: What Do We Know and Where Do We Go? *Gifted Child Quarterly, 44*(3), 152-170.

Richer, E. T. (2012). *Motivational interviewing and its effect on underachieving high potential adolescents.* (3493776 Ed.D.). Teachers College, Columbia University, Ann Arbor. Retrieved from http://ezproxy.uow.edu.au/login?url=https://search.proquest.com/docview/919692082?accountid=15112

http://EY9FF7JB6L.search.serialssolutions.com?ctx_ver=Z39.88-2004&ctx_enc=info:ofi/enc:UTF-8&rfr_id=info:sid/Education+Database&rft_val_fmt=info:ofi/fmt:kev:mtx:dissertation&rft.genre=dissertations+%26+theses&rft.jtitle=&rft.atitle=&rft.au=Richer%2C+Ellen+Thea&rft.aulast=Richer&rft.aufirst=Ellen&rft.date=2012-01-01&rft.volume=&rft.issue=&rft.spage=&rft.isbn=9781267145628&rft.btitle=&rft.title=Motivational+interviewing+and+its+effect+on+underachieving+high+potential+adolescents&rft.issn=&rft_id=info:doi/ Education Database database.

Rimm, S. (1997). An Underachievement Epidemic. *Educational Leadership, 54*(7), 18.

Rimm, S., & Lovance, K. (1992b). The Use of Subject and Grade Skipping for the Prevention and Reversal of Underachievement. *The Gifted Child Quarterly, 36*(2), 100. Retrieved from http://ezproxy.uow.edu.au/login?url=https://search.proquest.com/docview/212136274?accountid=15112

http://EY9FF7JB6L.search.serialssolutions.com?ctx_ver=Z39.88-2004&ctx_enc=info:ofi/enc:UTF-8&rfr_id=info:sid/ProQ%3Aeducation&rft_val_fmt=info:ofi/fmt:kev:mtx:journal&rft.genre=article&rft.jtitle=The+Gifted+Child+Quarterly&rft.atitle=The+Use+of+Subject+and+Grade+Skipping+for+the+Prevention+and+Reversal+of+Underachievement&rft.au=Rimm%2C+Sylvia+B%3BLovance%2C+Katherine+J&rft.aulast=Rimm&rft.aufirst=Sylvia&rft.date=1992-04-01&rft.volume=36&rft.issue=2&rft.spage=100&rft.isbn=&rft.btitle=&rft.title=The+Gifted+Child+Quarterly&rft.issn=00169862&rft_id=info:doi/

Ritchotte, J., Matthews, M., & Flowers, C. (2014). The Validity of the Achievement-Orientation Model for Gifted Middle School Students: An Exploratory Study. *Gifted Child Quarterly, 58*(3), 193-198.

Siegle, D. (2013). *The underachieving gifted child: Recognizing, understanding and reversing underachievement*. Waco, Texas: Prufrock Press Inc.

Siegle, D., & McCoach, B. (2018). Underachievement and the Gifted Child. In S. I. E. S.-D. Pfeiffer, Elizabeth (Ed); Foley-Nicpon, Megan (Ed) (Ed.), *APA handbook of giftedness and talent* (pp. 559-573): American Psychological Association.

Tomlinson, C. (2005). Quality Curriculum and Instruction for Highly Able Students. *Theory into Practice, 44*(2), 160-166. Retrieved from www.jstor.org/stable/3497034

Vald, G., & Valdes, G. (2003). *Expanding Definitions of Giftedness*: Taylor & Francis.

VanTassel-Baska, J. (2018a). Achievement Unlocked: Effective Curriculum Interventions with Low-Income Students. *Gifted Child Quarterly, 62*(1), 68-82.

Vialle, W., & Rogers, K. (2013). *Educating the Gifted Learner*: David Barlow Publishing.

Walters, N. (2008). *Contributing factors in the underachievement of gifted middle school students.* (MEd). University of New England, Armidale NSW. Retrieved from https://e-publications.une.edu.au/vital/access/manager/Repository/une:2431

White, S., Graham, L., & Blaas, S. (2018). Why do we know so little about the factors associated with gifted underachievement? A systematic literature review. *Educational Research Review, 24*, 55-66.

Whitmore, J. (1980). *Giftedness, Conflict, and Underachievement.* Boston: Allyn and Bacon, Inc.