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RESEARCH NOTE

Towards a multifaceted understanding of gifted underachievement

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This research note provides an overview of issues related to gifted underachievement based on research literature in the past decades, covering a range of topics including the definition, causes, common characteristics, reversal strategies and suggestions for future research.

Definition of gifted underachievement

There has been much debate over defining "underachieving gifted students". The most commonly adopted definitions of gifted underachievement include:

1. **A discrepancy between potential (or ability) and performance (or achievement).** (Baum, Renzulli, & Hébert, 1995a; Butler-Por, 1987; Dowdall & Colangelo, 1982; Emerick, 1992; Hoover-Schultz, 2005; Whitmore, 1980)

2. **If a student performs more poorly on measures of achievement than one would expect based on measures of ability, then he or she is underachieving.** (Colangelo, et al, 1993; Gowan, 1957; Green, Fine, & Tollefson, 1988; Krouse & Krouse, 1981; Supplee, 1990)

3. **A discrepancy between Predicted Achievement vs. Actual Achievement.** (Dowdall & Colangelo, 1982; Gallagher, 1991; Hoover-Schultz, 2005; Lupart & Pyryt, 1996; Redding, 1990; Thorndike, 1963)

4. **Underachieved in any of the four areas (Ability, Creativity, Productivity Performance, Motivation-Emotions-Values) necessary for the manifestations of giftedness.** (Hoover-Schultz, 2005; Richert, 1991; Rimm, 1997)

Causes of gifted underachievement

Many researchers suggested that the causes of underachievement are complex and some argued that if the underachievement pattern developed as early as in elementary school, the pattern of underachievement would often continue into the upper grades.

(Hoover-Schultz, 2005; Ries, Colbert, & Hébert, 2005). Basically the causes of underachievement can be separated into environmental factors and personal/family factors, where environmental factors appear to stem from two problem areas: the school and the student's peer group. (Hoover-Schultz, 2005)

1. School factor

- Inadequate curriculum content and poor teaching, disgusted with routine drilling and teaching, seeing no point in repeating what have already known, and no acceleration opportunities contributed to a lack of motivation in pursuing knowledge. Motivation is diminished when learning activities involving inquiry, research, creative self-expression, and the like are not included in the learning context. (Rayneri, Gerber, & Wiley, 2003; Reis, Colbert, & Hébert, 2005; Whitmore, 1986; Zilli, 1971)

- Anti-intellectual school atmosphere and excessive teacher authoritarianism demonstrated by overemphasis on conformity to teacher standards. (Zilli, 1971)

- Teachers' denial of children's giftedness because of their poor school performance or problem behaviours. (Kim, 2008; Rimm & Lowe, 1988)

- Incomplete or inappropriate gifted curriculum. (Renzulli & Park, 2000)

- Lack of or inappropriate counselling and inadequate home-school communication. (Renzulli & Park, 2000)

- Some teachers may hold stereotypes about gifted students (Kim, 2008; Pendarvis, Howley, & Howley, 1990) and have unreasonably high standards of performance, thereby eliciting withdrawal and failure to perform by gifted students who perceive undue pressure. (Pendarvis, Howley, & Howley, 1990)

2. Peer factor

- Absence of positive peer support. An awareness of the prevailing norms within peer groups and a desire to conform to group standards may make some gifted students deflect attention away from their gifted status through underachievement. (Brown & Steinberg, 1990; Reis, Colbert, & Hébert, 2005)

3. Family factor

- Parents lack the skill to support their children's unusual academic talents. (Hoover-Schultz, 2005)

- Inconsistent parenting techniques with parents frequently opposing each other when disciplining their children. (Fine & Pitts, 1980; Reis, Colbert, & Hébert, 2005; Rimm & Lowe, 1988)

- Parents are either overly lenient or overly strict. (Pendarvis, Howley, & Howley, 1990; Weiner, 1992; Zilli, 1971)
- Conferring adult status on a precocious child too early. Precocious development does not equal maturity. (Fine, 1977; Fine & Pitts, 1980; Rimm & Lowe, 1988)
- Parents espouse the values of achievement, but fail to model the satisfactions of that value in their own lives, showing no interest in their careers and learning. (Rimm & Lowe, 1988)
- Sibling rivalry may be a factor in underachievement -- an underachiever may feel intimidated by a sibling who excels, or reluctant to outperform a sibling who does not excel. (Fine & Pitts, 1980; Reis, Colbert, & Hébert, 2005; Zilli, 1971)
- Parents of underachievers tend to have less education and may hold neutral or negative attitudes with regard to education. (Reis, Colbert, & Hébert, 2005; Zilli, 1971)
- Absence of positive parental role models or at least one supportive adult. (Reis, Colbert, & Hébert, 2005)

4. Personal factor

- Mismatch between parents' plans for the future of their gifted children (e.g., in respects of education and career) and the children's study habits (such as lack of concentration) may result in underachievement. (Zilli, 1971)
- Adolescents' need for separation from parents and search for identity together with the pressure to conform to externally imposed standards may result in stress and alienation expressed in underachievement. (Seeley, 2004)
- If the underachieved child experiences precocious language development, it is possible that the child may invest less energy into motor activities, including sports and pencil-paper tasks, resulting in a learning disability that is manifested in motor deficiency. (Fine & Pitts, 1980)
- High-ability students can have learning problems or attention deficits of various types that affect or cause underachievement. (Reis & McCoach, 2000)
- Lack of self regulation and study skills, or lack of motivation. (McCoach & Siegle, 2003; Siegle & McCoach, 2005)

Common characteristics of gifted underachievement

1. Having **no goals** and **not making a career choice.** Finding **no value** in school experience. (Zilli, 1971)

2. **Low self-concept and self-esteem.** This affects the child's willingness to risk and supports withdrawal from academic challenges. The child will ultimately become increasingly deficient in basic skills and in study habits. (Dowdall & Colangelo, 1982; Fine & Pitts, 1980)

3. **Social isolation.** Even though the child may be doing poorly at school, s/he usually has some outside interest which s/he is likely to excel in. However, most of these outside interests are usually solitary activities, making it easy for the child to drift away from the crowd. (Fine & Pitts, 1980)

4. **Immaturity.** It is evident that gifted underachievers exhibited more instances of social immaturity than gifted achievers. (Clark, 1988; Dowdall & Colangelo, 1982; Fink, 1965; Hecht, 1975; Newland, 1976; Newman, Dember, & Krug, 1973; Raph, Goldberg, & Passow, 1966; Seeley, 2004; Weiner, 1992; Whitmore, 1980.)

5. **Underachiever syndrome**: **a complex personality pattern may reside in underachievers, making them changeable, unstable and burdened with an inferiority complex.** To increase personal comfort by protecting a shaky self-concept threatened by fear of failure or fear of success, the underachiever has learned to underachieve to avoid some discomforts or perceived penalties for effort. (Dowdall & Colangelo, 1982; Renzulli & Park, 2000; Whitmore, 1986; Zilli, 1971)

6. **Antisocial or indifferent behaviour.** The underachiever may use ridicule, sarcasm, biting humour to put down other students, parents, and even teachers due to his/her strong ego defenses. The underachiever may frequently rationalise his/her errors to eliminate his/her own responsibility. (Fine & Pitts, 1980; Seeley, 2004; Zilli, 1971)

Documented strategies for reversing underachievement of gifted children
(Selected empirical studies are summarised in Appendix I)

1. Home and family

- Parents play an important role in this respect. By maintaining a positive attitude toward their gifted children, even in the face of academic failure, would help the children to see that their underachievement pattern isn't a permanent situation and could be reversed ultimately. Parents are also suggested to remain calm, consistent in behaviour and objective during the underachievement situation. (Emerick, 1992; Rimm, 2007; Rimm & Lowe, 1988; Whitmore, 1986)

- Adults may encourage input from young people about decisions affecting their lives.

Gifted youth should be enabled to understand their own developmental stages so they could gain insights and develop healthy responses to thoughts and feelings they might otherwise regard as strange or disturbing. (Seeley, 2004)

- Provide parental training on supporting schoolwork; ways to address the needs of underachieved children, dealing with sibling issues, modeling attitudes; and ways to communicate effectively with their children. (Peterson, 2001)

- Other recommendations for parents:
  - avoid depending too much on positive reinforcement which may reduce intrinsically motivating behaviours
  - avoid conferring adult status on children too early or it may cause dominant power struggles at home and at school
  - avoid over monitoring of homework, encourage self learning and learn intrinsically with interest
  - modeling, e.g., parents interested in the valuing of personal careers and work provides an important model for children's achievement
  - avoid differences in parental standards, limits and expectations. A consistent leadership between the parents provides positive family organisation and clear guidelines. (Rimm & Lowe, 1988)

2. Positive peer support

- Positive peer interaction contribute to some students' reversal of underachievement. Students with friends who care about learning demonstrate better educational outcomes than those with less educationally interest or involved friends. (Chen, 1997; Reis, Colbert, & Hébert, 2005)

3. Teacher involvement

- a supportive teacher is most crucial in reversing underachievement and is characterised by:
  - caring for and sincerely liking the student as an individual
  - willing and ready to communicate with the student as a peer
  - showing enthusiasm and being knowledgeable about the topic taught and demonstrating a personal desire to learn more
  - welcoming student's participation and incorporating a wide range of instructional resources and strategies
  - having high but realistic expectations for the academically underachieving

students (Emerick, 1992)

- Proper mentorship and positive adult role models can be effective in reversing the pattern of underachievement in gifted young men. (Hébert & Olenchak, 2000; Kim, 2008; Peterson, 2001; Siegle & McCoach, 2005; Zilli, 1971)

- Teachers need to recognise the characteristics of gifted dropouts and identify potential gifted dropouts in the early grades. (Renzulli & Park, 2000)

- Teachers create less conventional types of learning activities, give students some choices and freedom in exercising control over their learning atmosphere, and encourage students to utilise different learning strategies. (Hoover-Schultz, 2005; Reis & McCoach, 2002)

- Class activities and assignments can motivate students to excel when they are "real" or relevant to them. (Emerick, 1992; Rayneri, Gerber, & Wiley, 2003)

- Allowing students to explore a variety of topics and skills and giving them the time to further pursue their own interests. (Siegle & McCoach, 2005)

4. School environment

- Creating a favourable environment by altering the traditional classroom organisation, such as conducting part-time or full-time special classrooms for gifted underachievers. (Reis & McCoach, 2002)

- Developing underachievers' independent learning abilities by providing special educational programmes in gifted education. (Emerick, 1992)

- A smaller student-teacher ratio. (Hoover-Schultz, 2005; Reis & McCoach, 2002)

- Both Whitmore (1980) and Butler-Por (1987) found that creative children's underachievement is minimised when school settings are least restrictive. Rayneri, Gerber, & Wiley (2003) found that gifted students expressed preference for an informal seating design, indicating a need for an environment that was flexible and allowed students to change their seating based on the nature of the learning activity.

- Acceleration strategy: subject and grade skipping can be considered for children who are nonproductive in school but scored extremely high on intelligence tests. (Emerick, 1992; Rimm & Lovance, 1992; Siegle & McCoach, 2005)

5. Promoting gifted underachievers' self image

- A significant change in the individual's concept of self was viewed as necessary for the reversal of the underachievement pattern. Confidence and a positive self-image can grow from a series of small successes in and out of school. With this, the student

begins to perceive academic success in school as a source of personal satisfaction and a matter of personal responsibility. This may lead the student to reflect on and understand factors that may have contributed to their underachievement pattern. (Emerick, 1992; Siegle & McCoach, 2005)

6. **Counselling/Intervention**

-   Holding parent-teacher conferences regularly and on an as-needed basis with gifted children in order to help them monitor their academic accomplishments and establish goals for improvement, as there may be important differences between the goals of parents or educators for the child and the child's own goals. (Siegle & McCoach, 2005; Whitmore, 1986)

-   Family conflict, non-encouraging parents, sibling rivalry, etc. are factors associated with underachievement. Counsellors should be sensitive to any anxiety found in the child caused by such issues. (Peterson, 2001)

-   Including goal-setting and future-planning activities in the interventions for bright underachievers. (Emerick, 1992; McCoach & Siegle, 2003; Morisano & Shore, 2010; Siegle & McCoach, 2005)

-   Counsellors can help motivate underachievers by explicitly pointing out their weaknesses in analytical problem solving, showing them how such weaknesses impair their school performance, and emphasising that such weaknesses are not due to lack of ability but a lack of motivation for such tasks. Appropriate coaching and planned modeling may reverse the underachieved pattern. (Redding, 1990)

-   Administering **Type III enrichment** experience (the Enrichment Triad Model), a multi-faceted intervention providing an authentic problem-based curriculum, allowing students to work in an area of interest and strength, and supplying a caring adult with whom to work. (Baum, Renzulli, & Hébert, 1995a; Baum, Renzulli, & Hébert, 1995b)

7. **Home-school collaboration to promote gifted underachievers' motivation**

-   Parents and teachers together find a systematic way to study and observe the underachieved child and share the observations with the child. Parents and teachers then develop partnership with the child to solve the problem together; formulate appropriate plan of action; evaluate the chosen solution/intervention and make modifications. (Whitmore, 1986)

Issues to note

It is understandable that the proposed interventions have taken on several different directions and no single intervention is the answer for every child or family. Dowdall and Colangelo (1982) argued that intervention programmes for gifted underachievers would not work if the programmes were for short periods of time. If improvement was a goal, then there must be a **comprehensive and long-term commitment** of the intervention programme. It was crucial that parents and school paid close attention to youngsters as they began their schooling, and that intervention programmes needed to be initiated in the early primary grades for maximum impact.

Some suggestions for future research

Differentiated counselling strategies to meet the needs of gifted underachievers

Gifted and talented youth have unique social, emotional, guidance and career development needs. Many researchers have recommended that differentiated counselling services be made available to address the needs of the gifted and talented youth and their families. Research will need to be conducted to determine what counselling strategies are most effective when dealing with what types of issues and whether traditional counselling models need to be altered when working with the gifted and talented. Models of differentiated counselling also need to be developed and evaluated. (Moon, Kelly, & Feldhusen, 1997)

Intervention strategies to reverse gifted underachievement

No single intervention is known to be effective in reversing all underachievement patterns of gifted underachievers. Different gifted underachievers will require different amount of counselling treatments, self-regulation training and instructional or curricular modifications. Apart from understanding the causes and correlates of gifted underachievement, further research may be needed to develop multiple approaches to both preventing and reversing underachievement. Such approaches are expected to differentiate among different types of underachievement, and incorporate both preventive counselling and innovative instructional interventions. (Reis & McCoach, 2000)

Underachievers with special needs or exceptionalities

There are gifted students who may suffer from either obvious or hidden disabilities, hampering their physical, cognitive and emotional development, and may even be

classified as underachievers. Such disabilities may include hearing disabilities, cerebral palsy, learning disabilities, attention deficit hyperactivity disorder, psychological and behavioural problems, and over-excitability. However, research on effective intervention models for these special populations remains scarce. (Reis & McCoach, 2002)

Dropout behaviours

Three major types of gifted dropouts were identified: involuntary dropouts (gifted students leave school due to personal crisis); retarded dropouts (gifted students failed to do the necessary work for graduation); and capable dropouts (gifted students who have the ability yet failed to make satisfactory academic progress). Family, personal, school and peer factors all interact with each other. It is suggested that further research should examine the causal relationship and interactions among these important factors using a longitudinal path analysis technique. Also, the development of behaviour checklists is considered helpful in identifying potential gifted dropouts. (Renzulli & Park, 2000)

Learning style preferences and perceptions

It was found that students' compatibility within the classroom affected their attitudes toward learning and academic performance. Students' perceptions of the learning environment also tended to play a part in determining their achievement levels. There would be a need to continue to "explore the relationship between classroom practices and academic underachievement". Particularly, more research effort should be paid to find out what kind of environments will stimulate gifted students' learning interests and needs, and whether any learning environments would likely foster underachievement. (Rayneri, Gerber, & Wiley, 2006)

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Appendix I. Relevant empirical studies related to strategies for reversing gifted underachievement

Author & Date	Title of Study	Method	Major Findings
Hébert & Olenchak (2000)	Mentors for gifted underachieving males: Developing potential and realising promise	*N=3 young males identified as underachievers; ranging from early elementary, early middle school and early collegiate years were interviewed; including their teachers, school counsellors, advisors, and other professionals.*	Through describing three cases of high ability young men, this study aimed to understand the importance of a significant adult mentor in reversing underachievement. The results showed that 1) open-minded and nonjudgemental are required characteristics of the mentor in sustaining an on-going relationship with the subject; 2) a caring adult who is willing to go beyond that of a normal instructor-student relationship by providing consistent social/emotional support is important; and 3) focusing on personal strengths and interests (interest-based strategies) is effective in helping the subject to improve his/her motivation, self-regulation and academic efforts.
Rayneri, Gerber, & Wiley (2006)	The relationship between classroom environment and the learning style preferences of gifted middle school students and the impact on levels of performance	*N=80 gifted students from grades 6, 7 & 8 were administered the Learning Style Inventory (LSI) and Student Perception Inventory (SPI).*	This study showed that many gifted students had a preference for certain classroom elements, such as dim lighting, informal seating, and tactile and kinesthetic learning. Further, the degree to which student learning style preferences were compatible with their perceptions of the classroom environments impacted on students' academic performance in some subject areas. These results suggested that it is important to take learning style preferences into account when designing programmes for gifted students and to have teachers who know how to motivate them. This is especially true for gifted underachievers because they are more externally motivated.
Schultz (2002)	Illuminating realities: A phenomenological view from two underachieving gifted learners (rethinking school programmes)	*N=2 grade 10 underachieved science students. Case study approach was used with data collected from direct observation, interviews and*	This study aimed to gain insights about the role teachers serve in the education process and how teachers can better meet student needs through the voices of two underachieved secondary students. Advice was given to teachers such as designing more fun projects and hands-on

		documentations.	activities; allowing students to actively engage in the choice of curricular options; and providing additional choices or variability in ways of addressing an assignment.
Rimm & Lovance (1992)	The use of subject and grade skipping for the prevention and reversal of underachievement	*N=14 parents; and 10 students who had subject- or grade-skipped during the past 7 years were interviewed using a structured interview schedule.*	In this study, parents' and students' perceptions of the effectiveness of the acceleration strategy were explored. The results showed that in retrospect, all 14 parents felt they had made the correct decision letting their children to participate in subject or grade skipping. All children had made very good academic adjustment. Both parents and students indicated the acceleration strategy worked well for them.
Redding (1990)	Learning preferences and skill patterns among underachieving gifted adolescents	*N=50 junior high school boys and girls; mean age=13.1 years, all enrolled in a gifted school, with equal halves of achievers and underachievers.*	Students' achievement subtests on analytic vs holistic tasks were examined. The underachievers showed a significant lower performance on analytic tasks than holistic tasks, whereas the achievers showed no such discrepancy. It was suggested that underachievers needed to be taught skills/strategies for handling tasks that involved reflective problem-solving, rote learning and detail-oriented analytical skills. The intervention programme should be tactically designed so as to permit students to see the difference(s) in their academic performance after using the taught strategies.
Baum, Renzulli, & Hébert (1995a)	The prism metaphor: A new paradigm for reversing underachievement	*N=17 gifted underachieved students aged 8 – 13 were guided through a Type III study referred by their teachers for 1 year. Both qualitative and quantitative methodologies were adopted for studying the underachieved phenomenon.*	By making use of the creative productivity (Type III) enrichment to reverse gifted underachievement, it was found that 11 out of the 17 participants showed improved academic achievement; 13 out of the 17 students appeared to exert more effort within their classes; and 4 out of the 17 students showed marked improvement in their classroom behaviour. Most of them were no longer underachieving in their school settings at the end of the intervention.