

THE DEVELOPMENT OF THE HIGH ABILITY CHILD

PSYCHOLOGICAL PERSPECTIVES ON GIFTEDNESS

EDITED BY

Erin M. Miller, Michael S. Matthews, and Dante D. Dixon



‘This book will become the definitive resource on the physical, social, and cognitive development of advanced learners. It provides an honest accounting of how they are unique, where they are not, and what questions remain unanswered.’

Scott J. Peters, Ph.D.,
Professor of Assessment and Research Methodology,
University of Wisconsin-Whitewater

‘This book takes the most in-depth look at the field of developmental psychology applied to the study of children with high ability of any book on the market. This is a must read for folks interested in the psychology of high ability.’

Anne N. Rinn, Ph.D.,
Professor of Educational Psychology,
University of North Texas



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The Development of the High Ability Child

This valuable text will help readers to understand the physical, social, and cognitive development of high ability children. Written by experts in the fields of education and psychology, each chapter applies core principles of psychology to the development of gifted and talented children. Through the content, readers will be shown how these children are like all children as well as the ways in which their development is unique.

Covering the psychology of learning and learners, personality differences, language and physical development, problem solving, and motivation of high ability children, this book provides readers with a strong foundation for supporting and developing advanced learners. The text also includes Field Note and Eye for Diversity sections to enable readers to put into practice, and recognize, important issues being discussed.

Throughout, the editors blend discussions of research with practical advice for individuals charged with nurturing children with advanced cognitive potential. It is an essential read for students, counsellors, administrators, therapists, and parents seeking to support high ability children and their needs.

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The Development of the High Ability Child

Psychological Perspectives
on Giftedness

**Edited by Erin M. Miller,
Michael S. Matthews, and
Dante D. Dixon**

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Introduction

Erin M. Miller and Michael S. Matthews

Teachers, administrators, and counsellors are often tasked with making decisions about how to best nurture children's intellectual development; however, many have had limited experience and typically no formal coursework regarding advanced cognitive development. Current books about parenting intellectually advanced children are limited because they either present opinions that are not supported by empirical evidence or rely on now-outdated information. Parents and teachers turn to school psychologists and administrators for assistance in nurturing their child's talents. The goal of this book is to apply core developmental psychology principles to the nurturing of children with high cognitive ability.

The idea for this book arose from observations of sessions at psychology and educational conferences that did not seem to be supported by what we know of current psychological research. We also noticed when speaking at schools about students with exceptional cognitive ability that the attendees often did not seem to understand that these children were generally normal psychologically, apart from their advanced academic abilities. These misconceptions were also evident in discussions on the U.S. and international social media accounts. The need for the book was further supported by discussions with our research colleagues, who had observed that many parents, teachers, administrators, and even school psychologists and other scholars sometimes expressed misconceptions about how basic psychology applies to intellectually advanced children. These experiences led us to the idea to gather scholars in the field of gifted education to address this issue through preparation of an edited volume on these topics.

One of the biggest challenges when discussing the research that is relevant to what is called the gifted education field is the issue of defining the terms used to label and describe individuals. We think that using the label "gifted" as the way of indicating the need for more challenging educational programming and curriculum is likely doing more harm than good. Beyond the fact that the connotation of the word "gifted" is loaded with value judgments that obfuscate the application of the term to only a few students, there is considerable debate regarding what "giftedness" even means (Brown et al., 2020). As of now, there is no common operational definition that is used by the majority of researchers or programs. The United States federal definition is:

Students, children, or youth who give evidence of high achievement capability in areas such as intellectual, creative, artistic, or leadership capacity, or in specific

academic fields, and who need services and activities not ordinarily provided by the school in order to fully develop those capabilities.

Title IX, Part A, Definition 22 (2002)

The Kaveri Gifted Education and Research Center in India (KGERC, n.d.) also defines giftedness as “exceptional potential or high capacity in intellectual, creative, artistic areas, leadership capacity, or in specific fields” but then notes the importance of socio-cultural context. They link the concept of giftedness to ancient Indian philosophy regarding spirituality and the unlimited capacity of humans that has been a part of Indian culture since ancient times. Giftedness in the Kingdom of Saudi Arabia is also described in terms similar to the U.S. federal definitions while also being part of the overarching national vision based on Islamic, educational, social, and professional foundations (Al Nafa’a et al., 2000; Saudi Vision, 2030, 2021).

In a study of the effect of teacher training in Belgium, Vreys et al. (2018) describe gifted children as:

children who are either labeled gifted based on a valid IQ-test, or who are considered above average ability children without being labeled as gifted, but according to the teachers’ sound judgment, could benefit from enrichment activities in one or more curriculum areas (around 10–20% of the children in Flemish schools). (p. 5)

Differences in definitions of giftedness from nation to nation often reflect what that nation values as important human traits as well as attitudes towards education. For example, Finland does not have a national policy for labeling gifted students likely due to an egalitarian approach to education, rather there is a focus on differentiation and services for these students in the regular classroom (Laine & Tirri, 2015). In Japan, the focus has been on domain-specific services most often in science and math (Basister & Kawai, 2018; Sumida, 2013). And as national priorities change so often does the conception of giftedness, an example of which is described by Pang (2012) in a change in focus in China from serving college-age gifted students through more open-ended services to focusing more on efficiency and utility.

Dai and Chen (2013) outlined three major perspectives regarding definitions of giftedness: (1) the Gifted Child, (2) the Talent Development, and (3) the Differentiation paradigms. For each paradigm, Dai and Chen describe *what* does gifted mean, *why* does it exist, *who* is labeled, and *how* participants are served. From the Gifted Child perspective, giftedness is a general trait in humans that is best measured through traditional intelligence (IQ) tests. This IQ factor is thought to influence all aspects of an individual’s life resulting in a qualitative difference in how one relates to the world. Decisions about identification are based on comparisons to the normal distribution of intellectual ability. Theories that focus on asynchronous development reflect the Gifted Child perspective (e.g., Neville et al., 2013). The purpose of the label is to help facilitate development across the lifespan based on the individual’s idiosyncratic conception of self-actualization.

The Talent Development paradigm focuses on specific domains of performance rather than a holistic trait and includes both formal selection through assessments of performance and self-selection into programming depending on interest and motivation. The goal of identification is to help the individual reach excellence in a certain domain. Within this paradigm are both multifactorial/mechanistic models such as Renzulli's three-ring conception of giftedness (Renzulli, 1978; 1986), Gagné's Differentiated Model of Giftedness and Talent (Gagné, 2004) and Sternberg's WICS model (Sternberg, 2003) and systems models in which giftedness is an emergent behavior such as the Actiotope Model (Ziegler, 2005; Ziegler & Phillipson, 2012). The difference between the two types of models can be subtle and a matter of interpretation, but regardless, talent development research seeks to define – the cognitive abilities, personality traits, and sociological factors that are specific to different domains of talent with the goal of developing these abilities and traits as well as building programs that reflect the necessary sociological factors.

The Differentiation approach focuses on the match or mismatch between the current educational environment and the specific child at any one moment of time. Permanent labels are not relevant and the goal is to meet the dynamic needs of any child who needs a more challenging experience in school. There is little to no focus on national norms of performance in identification, but rather a focus on local norms for the particular school system (Peters et al., 2019). Examples of this perspective can be seen in the work of Carol Tomlinson (2017) and the Advanced Academics model (Peters et al., 2014). The goal is meeting the current needs rather than concern about future performance in a particular domain of adult achievement.

These three different perspectives lead to a range of possible types of individuals being described as gifted in the research literature. In order to provide clarity, the following terms are used to describe individuals in the chapters of this text. The phrases “gifted students/children” and “students identified for gifted programming” are used to refer to students who were identified for advanced services, likely based on exceptional performance on aptitude or achievement tests. If the authors are referring to both those students who are formally identified and all other students who would benefit from advanced academic services even if not formally identified, then the terms advanced learners, cognitively advanced learners, or academically advanced students is used. The phrase “individuals with exceptional IQ scores” is used to refer to both children and adults when describing the results of studies that involved participants who were chosen based on psychometric assessments of intelligence.

Across all of these different models, perspectives and descriptors are also a recognition of specific populations who merit additional consideration or attention. None of the conceptions discussed earlier preclude the possibility of students also benefiting from additional educational labels such as those associated with specific learning disabilities/differences or psychological diagnoses such as ADHD in order to facilitate the best learning environment for those students. Those students are often referred to as twice-exceptional or 2e students. Where relevant, the chapter

authors will discuss how these additional exceptionalities can affect the application of research presented in the chapter. An additional factor to consider is the effect of the students' socio-cultural and socio-economic backgrounds on their education and development. Of particular concern is the underrepresentation of racial, ethnic, or other minority groups in programming for cognitively advanced students. Any inequities of health, environment, and opportunity will be reflected in a society's educational system and other societal structures.

A consistent theme through the chapters is that there is a large range of behaviors that are within the normal range. Most individuals are familiar with the idea of the normal range. It is often presented when discussing physical traits such as the normal range of heights. There is an average human height (162 cm for U.S. women) but also a large range (one of the editors is only 154 cm). Most women are around 162 cm but some are more or less while still being within the norm. Erin has always been short, but not so much that doctors would be concerned for her health. There are a smaller number of people with highly superior cognitive abilities but there is no reason to think they are not part of the expected range. Further, the range is a continuous measure, meaning there are no distinct markers. For example, it would be difficult to tell the difference between an individual who scored a 98.5% versus a 99% on a 600 point test just by observing their classroom behavior. Students with advanced academic potential are not average as far as cognitive ability is concerned, but are likely as variable as any other group of people in other human traits. Individual characteristics such as personality and motivation likely vary independently of cognitive ability. However, cognitive ability can interact with other human characteristics such as personality and motivation. For example, a child with high cognitive abilities who is motivated by academic rewards from teachers would be very concerned with their grades. A child with high cognitive abilities who is more motivated by self-initiated creative production would care more about their projects outside of the classroom. Every child has their own individual profile making them a unique person.

Throughout the text there are sidebars that extend and enrich the content in several different ways. There are reflections from students, parents, teachers, and counselors called "Field Notes." These provide insight into real-world experiences that illustrate one or more of the issues and ideas discussed in this chapter. These vary in length and number depending on the content of the specific chapter. The one exception is the Problem-Solving chapter. Here, you will find a practical example built into this chapter from the perspective of a gifted teenager rather than discrete "Field Notes." Some of the Field Notes have the full name of the author and others include only the first names depending on whether the individual wanted to be fully identified. There are also sidebars labeled "Eye for Diversity" each of which were written by Dante Dixson. These will address, when necessary, how the information or advice in the chapter might be affected by differences in cultural norms, values, or beliefs.

The chapters included in the book roughly follow the order that these topics are presented in many General Psychology textbooks beginning with research methods.

In “Key Methodological Issues in Researching Gifted Education and Advanced Academics” Matthew McBee guides the reader through the complexities of studying this small subgroup of children. Most of the topics, such as how to be a critical consumer of information, are applicable to research in general and others such as issues of studying small populations are more specific to studying groups such as gifted and advanced learners. McBee also effectively summarizes several overarching concerns such as the replication crisis in the field of psychology and the push towards more open science practices.

Chapters 2–4 cover the fundamental topics of physical development, the psychology of learning, and memory. These chapters form a foundation as the concepts discussed in these chapters are applied though the remaining chapters of the book. Gifted education researcher and historian, Jennifer Jolly tackles the complicated and often controversial topic of physical development and advanced cognitive ability. This is a challenging area of study due to the emeshing of legitimate scientific studies such as longitudinal studies of the relationship between IQ scores and health with less reputable endeavors such as the snake oil of pseudoscience all the way to the horrors of eugenics. Jolly separates the trustworthy from the fictions and myths in her review of this topic.

The chapter, “Understanding Cognitively Advanced and Gifted Learners Through the Psychology of Learning,” by James Bishop and Julia Hujar, describes the application of Behaviorism, Social Cognitive Theory and Constructivism to understanding the actions and reactions of cognitively advanced learners. Although the basic principles of these theories apply to all individuals equally, how the principles are applied and the outcomes vary for advanced learners. Understanding these core systems of learning is the key to understanding psychology in general.

An exploration of the cognitive processes of memory also involves aspects that are universal to all learners and aspects that are specific to advanced learners. This chapter is written by one of the editors, Erin Morris Miller. Memory is an overarching term for multiple processes related to the acquisition, storage, and retrieval of information of all kinds. As superior memory is a key ability that is assessed when determining which students would be identified as needing gifted education services, this chapter provides critical knowledge regarding how to recognize and serve these students. These superior memory abilities would then be applied in the two other major topics of cognitive psychology in the chapters, “Language Development and Education of Gifted Learners and Precocious Readers,” by Mary Slade and “Problem Solving Characteristics in Gifted and Advanced Learners,” by Camelia Birlean, Emma Margaret Birlean, and Bruce M. Shore. Sophisticated language and problem-solving skills are two more areas that are often noted as characteristics of gifted and cognitively advanced students.

The final three chapters address several non-cognitive factors that are important in the actualization of the learning and cognitive abilities into academic achievement and professional success. Hope Wilson lives up to her name with a chapter, “Motivation and Achievement in Gifted and Advanced Learners,” describing the

drives that determine in what direction individuals will apply their abilities and whether they will persevere in those endeavors. Another factor affecting direction and perseverance is personality. Although there is no single definition of personality the chapter, “Individual Differences in Personality Among Gifted and Cognitively Advanced Learners,” by Sakhavat Mammadov focuses on the trait approach and specifically applies the Big Five factors to understanding behavior and decision making. These major factors (Openness to Experience, Conscientiousness, Extraversion, Agreeableness, and Neuroticism) are correlated with multiple characteristics of lifespan development and provide a reliable lens through which to view cognitively advanced individuals. The final chapter addresses mental health. In her chapter, “The Psychological Adjustment of Gifted Children and Cognitively Advanced Learners,” clinical psychologist Andrea Esperat Lein describes the biological, learning, cognitive and non-cognitive factors that facilitate positive mental health as well as the factors that can lead to mental health struggles.

In the final chapter, we share possible directions for future research to understand students with advanced academic abilities and potential. We hope that this text will become a resource for counselors, teachers, and parents as well as facilitate the education of those who like to learn more about gifted and academically advanced students.

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