

Creatively Gifted Students Are Not Like Other Gifted Students:  
Research, Theory, and Practice

Edited by

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## Overview of the book

This book will focus on the needs of creatively gifted students and how schools can meet those needs. Creatively gifted students are those who show exceptional levels of creativity. These students may or may not have other talents and abilities (such as high academic potential or musical talent). The needs of creatively gifted students may not be recognized by current gifted education programs, even when creatively gifted students are included in those programs, and schools often do not know what they can do to meet these students' special needs. The goal of this book is to share cutting-edge research about the attributes and needs of creatively gifted students and the kinds of programs that best meet the special needs of creatively gifted students.

The problem is not that creativity is ignored by gifted education programs. That may be the case in some schools, but most gifted education programs have the promotion of creativity as one of their goals, and many include creativity in their screening process. Once students have entered gifted/talented programs, there is often (although not always) some effort made to nurture the creativity of the students in the program, whatever their particular gifts or talents or abilities. The importance of creativity is therefore often explicitly endorsed and creative-thinking skills are often promoted.

Despite this attention to the need to promote and nurture creativity of students in gifted education programs, there is an almost invisible lacuna in the way gifted education treats creatively gifted students. Exhibiting creativity may help a student in the selection process and creative-thinking activities may be part of the program itself. The special and important needs of creatively gifted students, however, are often overlooked. In contrast, a student in a gifted education program with extreme math or science or language abilities will likely be given opportunities to accelerate her math or science or language arts studies, work with a mentor in that area, or be given other opportunities related to her special area of ability and interest. Similarly, a student with outstanding music or art abilities will often be given opportunities to develop the domain-specific skills and acquire the domain-specific knowledge important in her area of special talent. But there is a rarely any program, or provision within a broader gifted/talented program, for a student who is extremely creative, but not necessarily (at least yet) highly accomplished in one particular area.

This book will address the following topics:

- cultural influences on the kinds of constraints that influence creative performance, both positively and negatively
- social needs of creatively gifted students
- assessment for student selection - aligning program goals with selection procedures
- developing teachers' skills and comfort in teaching creatively gifted students

- applying a dual process (conscious/unconscious vs. explicit/implicit) model to understanding creative giftedness
- career development for creatively gifted students
- making gifted programs work for creatively gifted minority students
- engaging creatively gifted but underachieving students
- the interplay of nature and nurture in the development of creatively gifted students' thinking
- the complex relationship between intelligence and creativity
- techniques that increase and utilize creativity in play
- how to improve the critical and evaluative thinking skills of creatively gifted students in ways that enhance both idea generation and selection in the writing process

The overarching goal of this book is to share with scholars, educators, and practitioners the latest research on creatively gifted students and the kinds of programs that best meet their often unique needs. The book will be rooted in empirical research, but will show how this research can be put into practice in schools and gifted education programs.

Below is a tentative list of the chapters of the book.

1. Kyung Hee Kim, James C. Kaufman, and John Baer: Introduction  
In this introduction, we will discuss the need for this book. We will then outline what the reader can expect in the chapters that follow.
2. Kyung Hee Kim: Differentiating Between Academically Gifted and Creatively Gifted Students  
This chapter discusses the key point that creative giftedness is different from academic giftedness, and this distinction needs to be understood to best nurture and help students.
3. Ronald Beghetto: Nurturing Creativity in the Micro-moments of the Classroom  
This chapter will focus on strategies for developing prospective and practicing teachers' comfort and ability working with gifted students' unexpected and potentially creative ideas. Tips for recognizing, following up on, and supporting students' creative potential will also be provided.
4. Eunsook Hong: Creativity Instruction: Does It Help Students Improve Creativity?  
Students who are instructed to be creative when solving problems tend to produce more creative products than those who are not instructed. In this chapter, I will discuss how culture influences the relationship between creativity instruction and creative performance.
5. John Baer: Aligning Program Goals, Student Selection, and Program Activities  
Gifted programs have many different goals, and the selection process should match those goals. Academic ability and achievement tests may be appropriate for programs that have no specific focus, but many programs have more clearly delimited goals such as nurturing creative writing skills or developing future scientists. The Consensual Assessment Technique is a powerful tool for assessing creativity in specific areas and can be adapted to work in almost any domain.
6. Paul Silvia: The Intuitive Critic: How to Foster Creativity By Cultivating Self-Criticism  
This chapter considers the tug-of-war between coming up with ideas and criticizing ideas, with an emphasis on the domain of writing. Many creativity theories contrast idea generation and idea evaluation as different creative stages, but they don't consider how they affect each other. I will present and build upon ideas developed by Peter Elbow, author of several classic books about the writing process. Elbow suggested that writing calls upon an intuitive side and a critical side, and that training one side will improve the other. Learning to be a better, tougher self-critic not only makes it easier to revise and develop ideas, but it makes it easier to come up with promising ideas in the first place. Some practical strategies for cultivating a productive inner critic will be discussed.
7. Sandra Russ: Helping Children Improve Pretend Play Skills

Research studies have found that play intervention techniques can improve imagination in play. I and my colleagues are developing play intervention techniques for pre-school and school-age children that have been effective in increasing emotional expression and imagination in play. Implications for the classroom will be discussed.

8. **Rex Jung: Understanding and Growing the Brain of the Creatively Gifted Child**  
Modern neuroimaging techniques are demonstrating measurable changes within the individual brains of children as they undergo normal developmental processes, and as they learn a new skill (e.g., Tetris). This "neuroplasticity" has implications for the development of intellectual and creative capacity within a given child, but also represents an opportunity to shape a child's brain in a manner amenable to measurable outcomes. If we knew something about how the structure and function of the brain facilitated creative capacity, might we be able to structure a learning environment to better identify and facilitate its development over time? Indeed, research studies have recently demonstrated specific neuronal, axonal, biochemical, and functional attributes of the brain associated with high creative skill. This chapter will outline what we know about developmental brain processes, brain plasticity, intelligence, and creativity, the combination of which neuroscientific research might exploit to serve the creatively gifted child.
9. **Susan Daniels: Picture This: Integrating Visual Thinking, Design, and Creativity Across the Curriculum**  
A foundation of anecdotal reports, biographical studies, and empirical evidence suggest that creative individuals across domains utilize visual thinking throughout the creative process. This chapter will build upon that literature base with recommendations of practical applications to assist teachers in applying visual teaching and learning strategies along with principles of design to foster creative development within and across curricular areas.
10. **Susan Paik: Encouraging Productive Giftedness: Home and School Practices**  
This paper will discuss the importance of early experiences and implications of making giftedness productive for talented students. The paper will also provide clear research-based recommendations regarding home and school practices for parents, teachers, and other caregivers working with these populations.
11. **Jonathan Plucker: Connecting Student Engagement to the Academic and Social Needs of Creatively Gifted Students**  
For the past 20 years, the term "student engagement" has been popping up in the world of education with increasing frequency. Over the past few years, research provides evidence that engagement is a key component of student academic success. Yet with considerable evidence supporting the positive effects of high engagement in school, the role of engagement with gifted and talented students has received much less attention. By broadly examining how the different components of student engagement connect to the academic and social needs of gifted and talented students, we will identify a number of practical, research-based strategies for increasing the engagement of gifted

underachievers. This chapter will show the importance of increasing gifted and talented student engagement and how this can be done in the current educational system.

12. Barbara Kerr: Career Development for Creatively Gifted Students -- What Parents, Teachers, and Counselors need to Know

For adolescents who want creative work, the way is unclear and the barriers are many. How does one become a video game designer, an inventor, or an installation artist? This chapter describes a new strategy of profiling, in which we compared the profiles of adolescents to those of eminent people in the arts, sciences, and healing professions when they were sixteen years old. Next, we created research-based interventions using both rational and intuitive techniques, combining goal-setting with visualizations and flow state experiences. The next step was to contact high schools in the state with the opportunity to "profile" and send teams of up to twelve students for a comprehensive day of assessment, individual guidance, group career development, and goal-setting. We have now counseled 600 gifted adolescents, and learned much that can be helpful to parents, teachers and counselors.

13. Scott Barry Kaufman: Dual-process Theory and Creatively Gifted Students: How Two Minds Produce Creative Giftedness

While dual-process theories of cognition have increased our understanding of explicit and implicit thought processes, the application of dual-process theory to creative giftedness in an educational context has not received as much attention. Creative giftedness surely involves both conscious, controlled, and deliberate thought processes as well as nonconscious, spontaneous, and automatic thought processes. Unfortunately, controlled cognition gets the bulk of attention in the classroom and in the identification of gifted students at the expense of more spontaneous forms of cognition. By using measures informed by dual-process theory, educators can increase the chances that their gifted students will not only be "school-smart" but will also be creative. I will review the literature on dual-process theory as applied to understanding intelligence, creativity, reasoning, rationality, and decision making and make recommendations for how educators can widen the net of creatively gifted students that are identified and nurtured.

14. Dean Keith Simonton: Genetic Gifts Grow: Talent Doesn't Stand Still

It is common to think of a creative gift as something given at birth. It merely awaits a nurturing environment to develop and grow. But if genetic endowment is epigenetic, nature will transform regardless of nurture.

15. Franzis Preckel: The Relationship Between Intelligence and Creativity, and Between Reasoning Ability and Divergent Thinking

This chapter will focus on the relationship of intelligence and creativity - or to be more specific, about the relationship of reasoning ability and divergent thinking. The link to giftedness is realized by discussing the threshold theory which assumes that both constructs are rather unrelated above a threshold of IQ 120.

16. Jane Piirto: But Isn't Everyone Creative?

Everyone is creative, and they are taught to suppress creativity. Some believe that some people are more creative than others by dint of heredity or personality. Education is an important factor in the development of creativity. The inclusion of creativity as a separate type of giftedness in the Maryland definition has posed many problems for contemporary educators, as they have struggled to make the distinctions between high IQ and creative potential, as they have wrestled with thresholds of test scores and measures of ability, as they have tried to meet demands that they be accountable, when accountability is defined as numerical outcomes. In the 1992 attempt to define the role of schools in nurturing talent, we see again that the intellectual, the creative, and the artistic are separated. This seems to imply that the intellectual is not creative, the creative is not intellectual, the artistic is not intellectual or creative. Common sense says that both the intellectual and the artistically talented are creative, and that creative people can be both intellectual and artistic.

17. Kyung Hee Kim, James C. Kaufman, John Baer: Take Home Points: How to Nurture and Help Creatively Gifted Students

In this final chapter we will review and synthesize key points from the chapters in the book. We will then offer some practical and theoretical suggestions for future work.

People who are interested but have not confirmed their title or abstract: Zorana Ivcevic, Del Siegle

**Market:**

This book could easily be a supplemental book for courses in Teacher Education, Gifted Education, and Special Education. In addition to students, potential readers would include education and psychology researchers and teachers and parents of gifted students.

Most Gifted Education courses use course packets and might like having a good collection like this one in a single volume. For example, the *University of South Florida's* online Master's program in gifted education (<http://www.coedu.usf.edu/main/departments/sped/gifteded/GiftedMain.html>) lists several courses that might use this as a text, such as EGI 5307 Theory and Development of Creativity; *Arizona State University* has Master of Education programs in Gifted Education at both the Elementary or Secondary levels, with courses like SPE 585 Creativity: Research & Development in Gifted Education (<http://teach.asu.edu/node/719>); *Spokane's Whitworth University's* Master of Arts in Teaching, Emphasis in Gifted and Talented requires courses like EDG 553 Creativity and Analytical Thinking; and the *University of Denver's* Certificate in Gifted Education program includes such courses as CUI 4408 Creativity: Theory and Practice. Many programs (e.g., *Ball State University's* Center for Gifted Studies and Talent Development, the Graduate Education Programs in Gifted Education at *The College of William and Mary*, and the Curry School of Education at the *University of Virginia*) offer both endorsement-level as well as Master's- and Doctoral-level courses.

Many states have special or add-on endorsements in gifted education, that require some work in the area of creatively gifted students (e.g., Georgia, [http://www.doe.k12.ga.us/ci\\_iap\\_gifted.aspx#certification](http://www.doe.k12.ga.us/ci_iap_gifted.aspx#certification); Idaho, [www.itag-sage.org/EndorsementOverview.pdf](http://www.itag-sage.org/EndorsementOverview.pdf); Kentucky, <http://www.wku.edu/Dept/Support/AcadAffairs/Gifted/cmsmadesimple/index.php?page=gifted-talented-endorsment>; Virginia, <http://www.jmu.edu/outreach/gifted.shtml>; Ohio, <http://ohiolearns.org/catalog/displaydegree.php?id=415>; Florida, <http://education.ucf.edu/gifted/>; Maine, <http://outreach.umf.maine.edu/program-information/gifted-talented-courses/>; Colorado, <http://www.coloradogtacademy.org>; Georgia, <http://www.coe.uga.edu/epit/gce/endorsements.html>; and Iowa, <http://www.education.uiowa.edu/tess/tep/certguidesinfok12.html>). Many if not most colleges that have teacher education programs in those states have courses that would be potential markets for this book.

### **Competing Books:**

There are many books on creativity in schools and classrooms. Some books focus on practical suggestions for how teachers might include creativity in their curriculum. For instance, Alane Starko's *Creativity in the Classroom, 3<sup>rd</sup> Edition* (Lawrence Erlbaum Associates, 2005) offers practical considerations for how teachers might incorporate creative thinking into their curriculum. Similarly, Jane Piirto's *Understanding Creativity* (Great Potential Press, 2004) draws on real life examples of creators to offer advice on how to incorporate creativity into the classroom. Ai-Girl Tan's and Lai-Chong Law's *Creativity for Teachers* (Marshall Cavendish Academic, 2004) highlights developments of creativity theory and the implications for classroom teaching. In addition, *Creativity in Youth: Research and Methods*, by Anne S. Fishkin, Bonnie Cramond, and Paula Olszewski-Kubilius (Hampton Press, 1999), contains theoretical and research-based essays. Our book differs from these in that there is a specific focus on creative giftedness in students (not just creativity in students).

Similarly, there are countless books on gifted children (too many to list here), but most focus on many facets of giftedness, not just creativity. Some recent outstanding ones include Susan Daniels's and Michael Piechowski's *Living with Intensity* (GPP, 2008), Steven I. Pfeiffer's *Handbook of Giftedness in Children: Psychoeducational Theory, Research, and Best Practices* (Springer, 2008), *The Development of Giftedness and Talent Across the Life Span*, edited by Frances Degen Horowitz, Rena F. Subotnik, and Dona J. Matthews (APA, 2009). We believe that people who enjoy these books and are interested in creativity will also want to read our proposed book.

One of the few books that specifically focuses on both creativity and giftedness is Donald Treffinger's *Creativity and Giftedness* (Corwin Press, 2004), yet his edited book is a collection of previously published articles – clearly a different approach than this proposed volume. Other books that focus on both topics have a particular slant. Bharath Sriraman's *Creativity, Giftedness, and Talent Development in Mathematics* (IAP, 2008) focuses within the domain of mathematics. *Creativity and Giftedness in Culturally Diverse Students*, edited by Giselle B. Esquivel and John C. Houtz (Hampton Press, 2000), has an emphasis on diversity, and Barbara A. Kerr's impressive *Encyclopedia of Giftedness, Creativity, and Talent* (Sage, 2009) has a scope and length much broader than the one we are proposing.

## About the Editors

**Kyung Hee Kim** is an Assistant Professor of Educational Psychology at the College of William and Mary. She obtained a Ph.D. from the University of Georgia in 2004. Her research interests are: (1) Understanding creativity by comparing it with intelligence, achievement, personality, etc.; (2) Understanding and identifying the characteristics of creatively gifted students; (3) Assessing creativity; and (4) Nurturing creativity with respect to environmental and cultural interactions.

Dr. Kim serves on the editorial board of the *International Journal of Creativity and Problem Solving* and the *Psychology of Aesthetics, Creativity, and the Arts*. Her research has been recognized as major contributions in the field of Educational Psychology. In 2009, she received the Berlyne Award from the American Psychology Association (APA) and the 2009 New Voice in Intelligence and Creativity Award from the University of Kansas and the Counseling Laboratory for the Exploration of Optimal States. In 2008, she received the Hollingworth Award from the National Association for Gifted Children (NAGC) and the Ronald W. Collins Distinguished Faculty Research Award and the Outstanding Faculty Award from EMU. She has received other awards for her outstanding research; from EMU (Faculty Scholarship Recognition Award) in 2007; from NAGC in 2005; from the American Creativity Association (ACA) in 2005; and from the International Council of Psychologists (ICP) in 2004.

**James C. Kaufman** is an Associate Professor of Psychology at the California State University at San Bernardino, where he directs the Learning Research Institute. He received his Ph.D. from Yale University in Cognitive Psychology in 2001. Kaufman's research broadly focuses on nurturing and encouraging creativity. He is specifically interested in creativity's role in fairness; everyday creativity; increasing creativity in the classroom; and the structure and assessment of creativity. He is also interested in related topics such as intelligence, personality, motivation, and thinking styles.

Kaufman is the author or editor of 17 books published or in press. These include *Creativity 101* (Springer, 2009); *Essentials of Creativity Assessment* (with Jonathan Plucker and John Baer; Wiley, 2008), *International Handbook of Creativity* (with Robert Sternberg; Cambridge, 2006), *Applied Intelligence* (with Sternberg and Elena Grigorenko; Cambridge, 2008), and the forthcoming *Cambridge Handbook of Creativity* (with Sternberg). He has published more than 145 papers, chapters, and reviews. His research has been featured and discussed in CNN, NPR, *New York Times*, *Los Angeles Times*, *The New Yorker*, and the BBC. He has traveled around the world talking about the power of creativity, keynoting in Taiwan, Qatar, Korea, Spain, France, and other places.

Kaufman is a founding co-editor of the official journal for the American Psychological Association's Division 10, *Psychology of Aesthetics, Creativity, and the Arts*. He is also the Associate Editor of *Psychological Assessment* and the *Journal of Creative Behavior*. He is also the editor of the *International Journal of Creativity and Problem Solving* and he is the Series Editor of the "Psych 101" series from Springer Publishing. He received the 2003 Daniel E. Berlyne Award from APA's Division 10, the 2008 E. Paul Torrance Award from the National Association of Gifted Children, and the 2009 Early Career Research Award from the Western Psychological Association.

**John Baer** is a professor at Rider University. His research on the development of creativity and his teaching have both won national awards, including the American Psychological Association's Berlyne Prize and the National Conference on College Teaching and Learning's Award for Innovative Excellence. He currently serves on the editorial boards of the *Journal of Creative Behavior*; *Psychology of Aesthetics, Creativity, and the Arts*; and the *International Journal of Creativity and Problem Solving*. His books include *Creativity and Divergent Thinking: A Task-Specific Approach*; *Creative Teachers, Creative Students*; *Creativity Across Domains: Faces of the Muse*; *Reason and Creativity in Development*; *Are We Free? Psychology and Free Will*; and *Essentials of Creativity Assessment*. He has been a teacher and program director in gifted education and served as a Regional Director in the Odyssey of the Mind creative problem solving program.

**Bharath Sriraman** is Professor of Mathematics in the Department of Mathematical Sciences and also on the Faculty and Advisory Board of Central/SW Asian Studies at The University of Montana, where he occasionally offers courses on Indo-Iranian and Turkic studies and languages. He lives in Western Montana by way of the merchant marine; Alaska (B.S in mathematics, University of Alaska- Fairbanks) and Northern Illinois (M.S & PhD in mathematics, minor in mathematics education). He comes from a background of one interested in linguistics and comparative philosophy accidentally turning to mathematics as an easy route to academic degrees, who later "found" himself in mathematics education as a result of teaching in U.S public schools. He maintains an active interest in mathematics education, educational philosophy, history and philosophy of mathematics and science, creativity; innovation and talent development; gender studies; and political and social justice dimensions of education. He has published over 200 journal articles, commentaries, book chapters, edited books and reviews in his areas of interest., and presented over 110 papers at international conferences, symposia and invited colloquia. For a full list visit <http://www.math.umt.edu/sriraman/presented.html>. [Interdisciplinarity, Creativity and Learning](#) (pdf)

Bharath is more or less fluent in 7-9 languages [English, German, Farsi, Hindi, Tamil, Urdu, Kannada, basic French and Danish] and travels/holds active ties with researchers in Australia, Canada, Cyprus, Denmark, Germany, Iceland, Central Asia and Turkey. He received the 2002 NAGC Outstanding Brief of the Year Award, was nominated for the 2006 and 2007 NAGC Early Career Scholar Award and was recently named the 2007 Outstanding Early Scholar by the School Science and Mathematics Association. Bharath is the founding editor of *The Montana Mathematics Enthusiast* and the [Montana Mathematics Enthusiast-Monograph Series in Mathematics Education](#). He is the Series Editor of [Advances in Mathematics Education](#) (Springer Berlin/Heidelberg) one of the Editors of *ZDM-The International Journal on Mathematics Education*, Consulting Editor of *Interchange: A Quarterly Review of Education*, and the Associate Editor of *Mathematical Thinking and Learning: An International Journal*. Besides serving on the editorial boards of a dozen or so journals, other significant editorial roles include being an Associate Editor of *The Handbook of International Research in Mathematics Education* (2nd edition) published by Taylor and Francis in 2009, and serving on the editorial board of the [Encyclopedia of Giftedness, Creativity, and Talent](#). Current books include [Theories of Mathematics Education](#) [The Source Book on Nordic Research in Mathematics Education](#) [Critical Issues in Mathematics Education](#)