The Handbook of Secondary Gifted Education: New Curricular Strategies for Educators

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The Handbook of Secondary Gifted Education

First Edition was published in 2006.

This book was a contribution to Gifted Education as it focused totally on secondary students and their education.

It contained four parts—each devoted to an aspect of the adolescent gifted student.

The Second Edition

Maintains many of the aspects of the first edition in its focus on secondary gifted students.

Attends to the many changes that have occurred in education for the gifted student since 2006.

Contains new chapters that address issues in talent development, STEM, Common Core Standards, Twenty-First Century Skills, and other relevant issues.
The Second Edition

Has Five (rather than Four) Parts:

- Part I: On Being Gifted and Adolescent
- Part II: Talent Development in Adolescence
- Part III: What Schools Can Do: Provide Rigorous Curriculum for Gifted Secondary Students
- Part IV: What Schools Can Do: Provide Support Services
- Part V: What Teacher Education Can Do

We have modified our conception to address the needs of gifted adolescents more specifically than did the model presented in the first edition of The Handbook.

Each dimension includes more areas that we need to attend to in educating this special group of students.

Changes in the Personal and Social Areas include focus on moral and ethical dimensions (Personal) and empathy (Social).
Part I: Purpose: To focus on the nature of gifted adolescents—
Characteristics, Needs, Individual Differences

All seven chapters in Part I have been substantially revised and updated.

Part II: Purpose: To give educators a sense of the complete talent development process in multiple domains across time.

Three Chapters in Part II:
Chapter 8 is a revision from the first edition (Jarvin and Subotnik).
Chapters 9 and 10 are new to the book.
Wai and Olszewski-Kubilius offer new insights into the talent development process for gifted adolescents.

Part IV: Purpose: To provide the context for programs for gifted adolescents.
Changes:
Additional chapters on Leadership and School Counseling (Chapters 19 and 21).
More focus on AP specifically (Chapter 18).

Part V: Purpose: To reinforce the importance of teacher education, school administration, and professional development in the lives of gifted adolescents.
Changes:
Updating information from the first edition.
Major Additions in Part III

- Purpose: To Highlight needs in curriculum that have occurred since our first edition.
- We have addressed all four STEM disciplines.
- Our Mathematics (16) and Science (13) Chapters have been revised to note the current trends and needs in these disciplines for high ability adolescents.
- Major chapter additions include the chapter on Technology (Chapter 14) and the new chapter on Engineering (Chapter 15).
- Our Social Studies Chapter (12) is substantially changed.
- Our English Chapter (11) also reflects major changes since the first edition.
- All chapters on curriculum have addressed the impact of Common Core Standards, Content Standards, and Twenty-First Century Skills.

In Sum,

- The Second Edition continues to showcase research on areas that impact the education of gifted students at the secondary level.
- The Second Edition focuses on changes that must be considered as we continue to offer an education that is relevant to the educational landscape.
- The Second Edition is a Major Contribution to Gifted Education.

Current Trends in STEM and Social Studies Education

- We will first address what the focus of each discipline is.
- Technology will go first
- Engineering will go second
- Social Studies will go third
- We will move to strategies and opportunities for students that result from the courses
- Finally, Please Chat With Us! We are anxious to answer any questions and listen to your comments!
Technology Education for High-Ability Students

- Chapter Focus: How students improve or create new technologies rather than use technologies that already exist for learning.
- Today’s students are part of an entrepreneurial trend.
- An entrepreneurial approach maintains a balance between innovation and demonstrated need.
- Three approaches to technological entrepreneurship: Lean Startup (Eric Ries), the Scientific Method and Next Generation Science Standards (Engineering).

Four Models for Technology Education

- Curricular Incubator Model: “Business Incubator Start Up 1,” Barrington High School
- Self-initiated Models: Student Case Studies

Strategic Insights and Opportunities

- Ideas (must) originate with students.
- Authentic opportunities must be available.
- Nonhierarchical structures and dedicated spaces facilitate learning.
- Internet access is readily available for learning and collaboration.
- Setbacks are viewed as learning opportunities.
- Assessment is based on what students create and learn.
"The next great advance in the human condition will likely result from improved engineering instruction for gifted and talented students."

~Branson D. Lawrence, Jr. October 20, 2014

Engineering education currently faces several issues and misconceptions:

- Lacks definition
- Viewed in terms of construction
- Assumed to be a high-level, mathematically-dense field

Engineering teachers need to facilitate their students’ abilities to effectively access information and apply it appropriately.

Skill development in creativity, communication and business acumen coupled with understanding of mathematics and science systems are the hallmarks of an effective engineering education program and curriculum.
Creativity

- Real-world problems that require creative solutions and innovations.
- Not one correct answer.

Communication

- Effective skills in speaking, writing, and listening.
- Designing team engagement and discourse around engineering problems.

Business Acumen

- Technology has fueled the economic engine for the world.
- Engineers need to determine economic advantages and opportunities for designing products and systems.
Mathematics and science skills are not enough to educate the next generation of engineers. The cognitive activities used by engineers and engineering students utilize higher-order thinking skills. Analyze problem, Work on Solution, Evaluate, Repeat

- Incorporate technologies.
- Demonstrate understanding for those concepts that worked well and identify those that need improvement.
- Exhibit knowledge gained through writing and shared through presentations.
- Multiple levels: Self, Peer, Group

#integrative nature of curriculum
#exploratory human experience
#commitment to living in democratic society
#promotion of media literacy
#adaptive civic socialization
#promotion integration of technology into student learning
#C3 Framework: College, Career, Civic Life
Social Studies Strategies/Opportunities

- constructing positive learning experiences
- instructor passion
- students’ willingness to experiment with failure
- preparing individuals to become good citizens
- development of scholarly capacities

Questions