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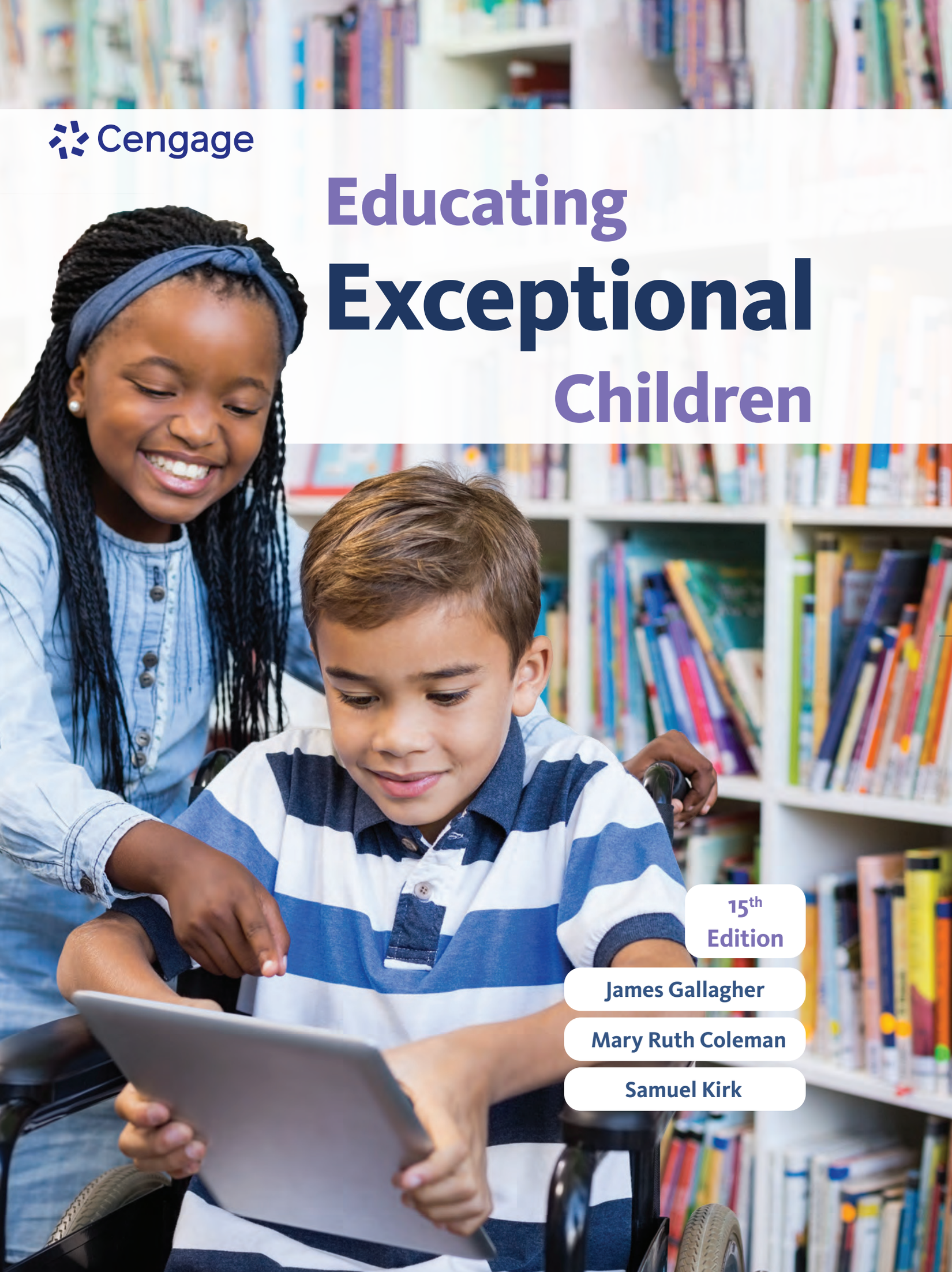
Educating Exceptional Children



15th Edition

James Gallagher

Mary Ruth Coleman

Samuel Kirk

Council for Exceptional Children 2020 Initial Practice-Based Professional Preparation Standards for Special Educators (K-12)

CEC

The CEC standards guide our field and define the set of knowledge and skills that make us "special educators." By learning the information presented in this text, you will gain an initial understanding of what our field is all about. The standards are, however, a means and not an end. Adopting the Ethical Principles (refer to the inside back cover of this book) and committing to the actual work of helping children with exceptionalities and their families are also essential. The standards are the beginning point of your professional path, and we welcome you to the field of special education!

Standard 1 Engaging in Professional Learning and Practice within Ethical Guidelines

Candidates practice within ethical and legal guidelines; engage in ongoing self-reflection to design and implement professional learning activities; and advocate for improved outcomes for individuals with exceptionalities and their families while considering their social, cultural, and linguistic diversity.

Standard 2 Understanding and Addressing Each Individual's Developmental and Learning Needs

Candidates use their understanding of human growth and development; multiple influences on development; individual differences; diversity, including exceptionalities; and families and communities to plan and implement inclusive learning environments and experiences that provide individuals with exceptionalities high-quality learning experiences reflective of each individual's strengths and needs.

Standard 3 Demonstrating Subject Matter Content and Specialized Curricular Knowledge

Candidates apply their understanding of the academic subject matter content of the general curriculum and specialized curricula to inform their programmatic and instructional decisions for learners with exceptionalities.

Standard 4 Using Assessment to Understand the Learner and the Learning Environment for Data-Based Decision Making

Candidates assess students' learning, behavior, and the classroom environment in order to evaluate and support classroom and school-based problem-solving systems of intervention and instruction. Candidates evaluate students to determine their strengths and needs, contribute to students' eligibility determination, communicate students' progress, inform short and long-term instructional planning, and make ongoing adjustments to instruction using technology as appropriate.

Standard 5 Using Effective Instruction to Support Learning

Candidates use knowledge of individuals' development, learning needs and assessment data to inform decisions about effective instruction. Candidates use explicit instructional strategies; employ strategies to promote active engagement and increased motivation to individualized instruction to support each individual. Candidates use whole group instruction, flexible grouping, small group instruction, and individual instruction. Candidates teach individuals to use meta-/cognitive strategies to support and self-regulate learning.

Standard 6 Supporting Social, Emotional, and Behavioral Growth

Candidates create and contribute to safe, respectful, and productive learning environments for individuals with exceptionalities through the use of effective routines and procedures and use a range of preventative and responsive practices to support social, emotional and educational wellbeing. They follow ethical and legal guidelines and work collaboratively with families and other professional to conduct behavioral assessments for intervention and program development.

Standard 7 Collaborating with Team Members

Candidates apply team processes and communication strategies to collaborate in a culturally responsive manner with families, paraprofessionals, and other professionals within the school, other educational settings, and the community to lead meetings, plan programs, and access services for individuals with exceptionalities and their families.

High Leverage Practices Addressed in Each Chapter

Chapter	High Leverage Practice
1: Children and Youth with Exceptionalities and Their Families	#3 Collaborate with families to support student learning and secure needed services.
2: Children and Youth with Exceptionalities and Social Institutions: Government, Courts, and Schools	#1 Collaborate with professionals to increase student success. #2 Organize and facilitate effective meetings with professionals and families.
3: Early Intervention Supports and Services	#7 Establish a consistent, organized, and respectful learning environment.
4: Children and Youth with Intellectual Disabilities	#4 Use multiple sources of information to develop a comprehensive understanding of a student's strengths and needs. #21 Teach students to maintain and generalize new learning across time and settings.
5: Children and Youth with Autism Spectrum Disorders	#9 Teach social behaviors. #20 Provide intensive instruction.
6: Children and Youth with Learning Disabilities	#5 Interpret and communicate assessment information with stakeholders to collaboratively design and implement educational programs. #8 Provide positive and constructive feedback to guide students' learning and behavior.
7: Children and Youth with Attention Deficit/Hyperactive Disorders	#14 Teach cognitive and metacognitive strategies to support learning and independence. #16 Use explicit instruction.
8: Children and Youth with Emotional and Behavioral Disorders	#10 Conduct functional behavioral assessments to develop individual student behavior support plans. #22 Provide positive and constructive feedback to guide students' learning and behavior.
9: Children and Youth with Communication, Language, and Speech Disorders	#15 Provide scaffolded supports.
10: Children and Youth with Special Gifts and Talents	#17 Use flexible grouping.
11: Children and Youth Who Are Deaf or Hard of Hearing	#12 Systematically design instruction toward a specific learning goal. #19 Use assistive and instructional technologies.
12: Children and Youth with Visual Impairments	#11 Identify and prioritize long- and short-term learning goals. #18 Use strategies to promote active student engagement.
13: Children and Youth with Physical Disabilities, Health Impairments, and Multiple Disabilities	#6 Use student assessment data, analyze instructional practices, and make necessary adjustments that improve student outcomes. #13 Adapt curriculum tasks and materials for specific learning goals.

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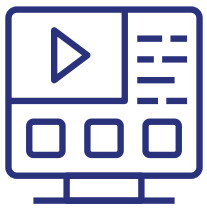

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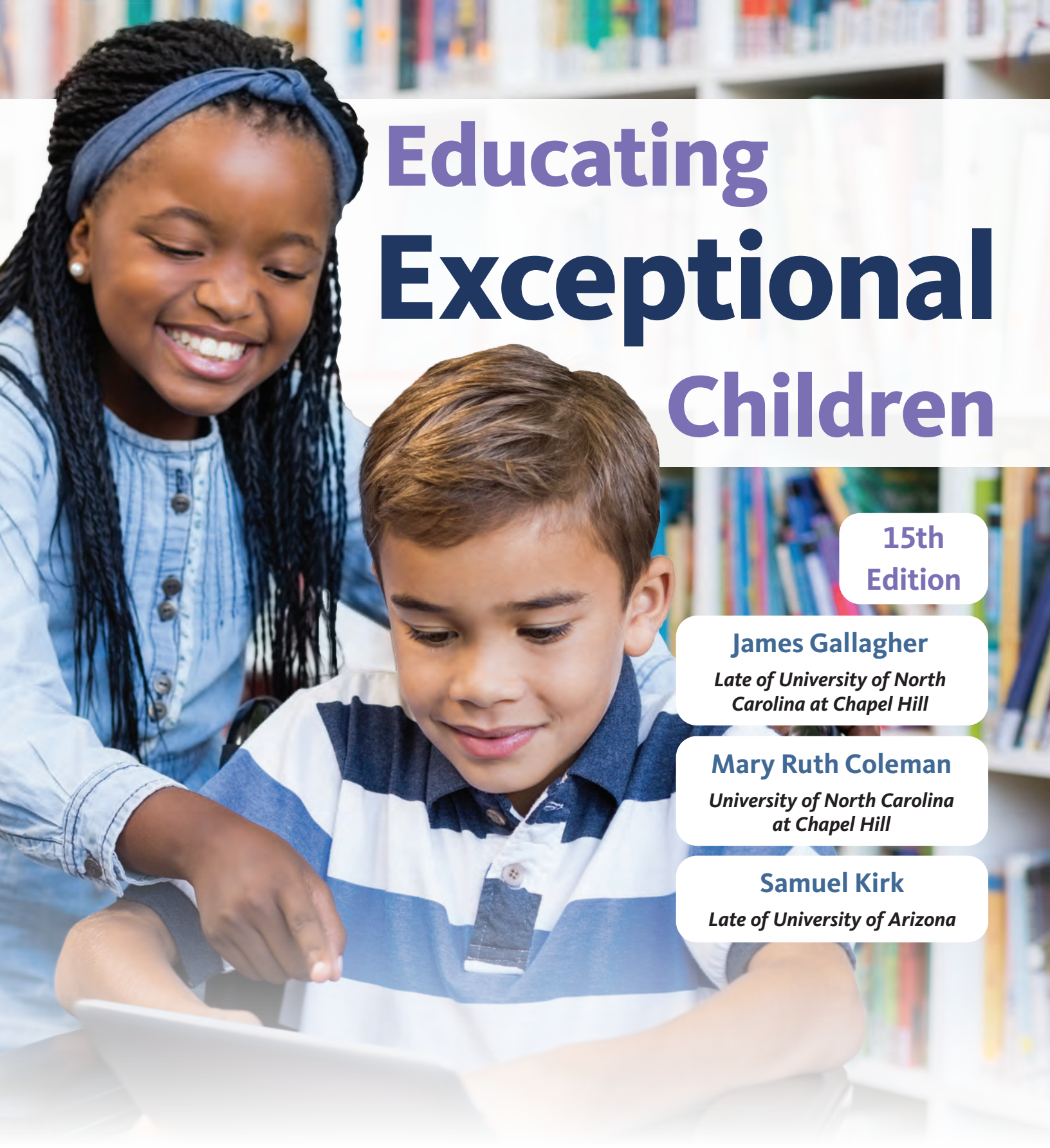

Educating Exceptional Children

15th Edition

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Cengage

Australia • Brazil • Canada • Mexico • Singapore • United Kingdom • United States

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Educating Exceptional Children,
Fifteenth Edition

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Leadership and Legacy of Dr. Samuel Kirk and Dr. James J. Gallagher

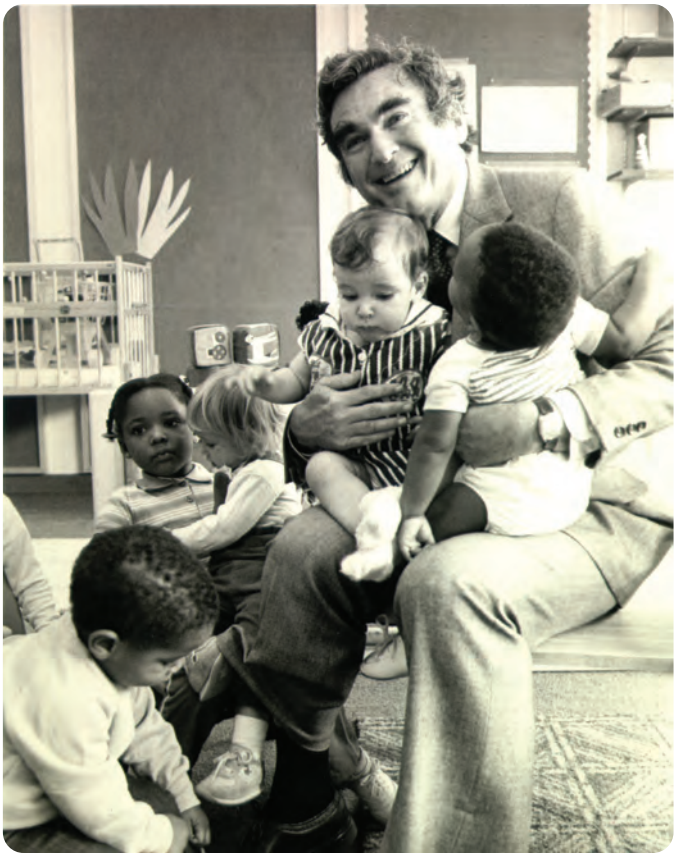
Courtesy of the University of Illinois Archives

Dr. Samuel Kirk, founding author of Education Exceptional Children

Educating Exceptional Children was first published in 1962 as the new field of special education was emerging and teachers needed to be prepared to work with children who were beginning to be included in public schools across the country. Dr. Samuel Kirk, the director of the Institute for Research on Exceptional Children at the University of Illinois, was the founding author of this text. In the first edition, he tackled the growth and development of children with a range of exceptionalities and addressed identification and educational practices to meet their needs. Much has changed in the ensuing decades since the first edition, but the central issue at the heart of Dr. Kirk's concerns remain with us today: how can we best serve students with exceptional learning needs within our schools?

Dr. James J. Gallagher, a student and colleague of Dr. Kirk, came on board as co-author on the fourth edition of *Educating Exceptional Children*. Dr. Gallagher was the first Chief of the Bureau of Education for the Handicapped in the U.S. Office of Education. He was a pragmatic visionary working to making educational excellence for all children, a reality:

- He realized that the complex needs of a child with disabilities would require a unique educational response and the Individualized Education Plan (IEP) was born.
- He understood that a prepared workforce of teachers would be critical to students' success, and he wrote textbooks and created model demonstration sites.
- He knew that families were key to supporting child development and he advocated family-friendly practices.
- He believed that gifts and talents existed across all cultural and economic groups, and he advanced appropriate policies for identification and services.
- He saw that a strong infrastructure was critical for sustaining positive changes, and he developed a technical assistance model of support.



FPG Child Development Institute

Dr. James J. Gallagher, pragmatic visionary for children with exceptional learning needs.

Dr. Kirk and Dr. Gallagher helped build the field of Special Education. Both worked tirelessly to ensure that children with exceptionalities were not forgotten. Their leadership shaped the laws, policies, and practices of the field. Their work is not finished… their legacy lives on. If you are reading this textbook, you are part of this living legacy. Thank you for helping make the world a better place for children with exceptionalities, their families, and the professionals who serve them!

Brief Contents

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Dedication

This book is dedicated to students who have exceptional learning needs, to their families, and to the educators who work to ensure that each student's strengths are nurtured and that their challenges are supported.

Thank you!

Preface

More than sixty years ago, Sam Kirk, a brilliant scientist and educator, penned the first edition of *Educating Exceptional Children*. When the first edition of this text was published in 1962, the future for children with exceptional learning needs was just beginning to change. Still a decade ahead was the key legislation that promised children with disabilities a "free and appropriate public education" (FAPE). Still further ahead were the numerous court decisions that solidified the educational rights of these children with exceptionalities. The field has changed over the last decades and our understanding of how we can support student success has expanded and deepened. Each new edition of this textbook reflects our growing knowledge base on how to address the strengths and challenges of students so they can thrive. Each new edition, however, still holds to our original purpose: to help educators gain the knowledge and skills needed to support the success of students with exceptionalities in school and in life.

Overview of the 15th Edition

The fifteenth edition (15e) builds on the strong foundation of previous editions, while carrying this seminal text into the future. Throughout the 15e, we focus on the bioecological factors that influence outcomes for the child and their family across the lifecourse. In each chapter, you will meet students and their families to bring the content of the chapter to life. The 15e takes a strength-based approach to students and incorporates a wealth of instructional/curriculum strategies to support student's success (including evidence-based teaching methods, Universal Design for Learning, High Leveraged Practices, and Differentiated Instruction). Each chapter discusses the importance of a collaborative team approach to student's strengths and challenges using the Multi-Tiered Systems of Support (MTSS) framework to address the academic/cognitive and social/emotional/behavioral needs of students.

Each chapter has been thoroughly updated based on current research with over 420 new citations. In addition to the research update, new topics include: high leverage practices; developing cultural competence; addressing the challenges of disproportionate representation within special and gifted education (examining the roles of implicit bias and structural racism); using on online learning and lessons learned during the COVID-19 "pivot"; a focus on the importance of "belonging" which goes beyond inclusion; and strategies to enhance mindfulness within our classrooms and schools. We continue to address the important topics of genetics, neurology, assistive technology, and information processing, and to follow the CEC standards for knowledge and skills needed within the profession of special education.

Key to the 15e is understanding that "belonging" goes well beyond "inclusion" and that respecting and supporting each student and their family is critical to building a sense of community. As part of this community building, we have worked to honor the changing language within the disability community. Language is always evolving; our intent is that our words speak to the importance

of respect and that they foster the spirit of belonging. The ongoing conversations about terminology are reflected within this text. Most often in the text we use person-first language, saying "student with a disability." This person-first language is meant to recognize the personhood as being first and foremost. However, some members within the disability community feel that their disability is a central and defining aspect of who they are and that person-first language fails to honor this belief. You will see this discussion in Chapter 5 as we look at the movement to use "Autistic student" rather than "student with Autism." We see this idea again in Chapter 11 as we explore "Deafhood." These conversations are important and ongoing.

We also see an evolution in language within our discussions of race and ethnicity. Terms are rapidly shifting, and throughout this text, we have tried to reflect these changes while maintaining respect for different preferences. When we cite specific research, we use the language that the researchers used; when we discuss specific issues, we use language that is respectful for the individual or the group. Our intent is to show the evolution of language while maintaining a deep respect for the individuals and groups impacted by the spoken and written words. As we do this, however, we are very aware that *language used is a personal preference,* and we encourage our readers to use the terms that people ask them to use because this is the best way to respect each individual.

Throughout the 15e, we address four themes:

- Bioecological factors that influence outcomes across the student's lifecourse
- Culturally relevant and responsive teaching methods and school environments
- Collaborative and intensive supports and services to address the learning, social, and emotional requirements for each student's success
- Strength-based approaches to students and their families.

Theme 1: Bioecological Factors that Influence Outcomes Across the Student's Lifecourse
A child's development takes place within the context of the family, neighborhood, school, and community. Their development is influenced by the dynamic interactions, over time, that take place across this system. The child, in turn, influences the system itself, changing the way interactions take place and how resources are used. In addition to the immediate context of the child and their family, the greater system of social structures (e.g., laws, policies, values, beliefs) work to shape the outcomes of the individual across their lifecourse. We discuss these bioecological factors using Bronfenbrenner's Bioecological Theory of Human Development (Bronfenbrenner & Morris, 2006) to explore how we can better support positive outcomes for students (Waski & Coleman, 2019). We also use this approach to explore the impact of structural and systemic racism on student outcomes.

Theme 2: Culturally Relevant and Responsive Teaching Methods and School Environments
Both special and gifted education continue to face challenges of disproportionate representation of students of color and of economically disadvantaged students. Within special education we see an over-representation of Black, brown, and economically disadvantaged students in many categories of disability; we see an under-representation of these same student groups within gifted education. Every chapter addresses appropriate identification and the disproportionate representation of culturally and linguistically different, and economically disadvantaged, students within special and/or gifted education. We also tackle specific challenges like the role of implicit bias in decision making, the need for family-centered interventions and culturally resonant practice in early intervention, the increasing identification of Latinx youth as learning disabled, the need for bilingual/bicultural approaches for students who are Deaf, and the underrepresentation of students of color within gifted education. We further examine how

developing cultural competence can support culturally relevant and responsive teaching methods and learning environments. In many of the chapters, we have gone directly to the "experts" to ask them how we can better address these needs within our classrooms and our programs (see special new special feature "Ask the Experts").

Theme 3: Intensive and Collaborative Supports and Services to Address the Learning, Social, and Emotional Requirements for each Student's Success

The key to success for students with exceptionalities is that they receive appropriate supports. Indeed, Schalock, Luckasson, and Tasse (2021), when discussing students with Intellectual Disabilities (ID), put it this way "…the most relevant difference between people with ID and the general population is that people with ID need different types and intensities of supports to fully participate in and contribute to society…" (pp. 64–65), and we could not agree more! In each chapter, we discuss the types and intensity of supports needed to help students thrive in school and in life.

Addressing the strengths and challenges of students with exceptionalities often requires deep collaboration across multiple stakeholders. This collaboration begins with strong family partnerships during the initial recognition of need for additional support, it deepens with the development of the Individual Education Plan, and it continues across the lifecourse of the student as they learn to "adult." We discuss collaborative, family-centered earlier intervention and transition planning for young children. We explore the role of multidisciplinary teams in the IEP process. We use the Multitiered Systems of Support (MTSS) to show how this collaboration can be supported within the K–12 environment, and we look at the transition process for post-secondary success of students. Collaboration between educators and family members is central to this support, but comprehensive support often must go beyond the school and family. We discuss "wrap-around" supports that may include mental health, medical support, parental education, job-coaching, and building social networks within neighborhoods and communities. This level of collaborative and intensive support is essential for student success. Positive outcomes for students with exceptionalities hinges on our ability to provide the supports and services needed for their success.

Theme 4: Strength-based Approaches to Students and Their Families

Every student has strengths and all families have assets. To often when we look at how we can support student's success, we focus only on their areas of challenge, ignoring their strengths. To often when we work with families, we fail to identify and connect with their assets. At times, we may even view students and family members through a deficit lens that fosters negative beliefs about what our students can do and undermines our ability to build the strong partnerships needed for positive outcomes. When we use a strength-based approach, we intentionally look for, engage with, and enhance the abilities of our students, and we focus on the many ways that families can (and do) contribute positively to their child's success. The use of a strength-based approach is central to everything we do to support students with exceptionalities and their families. This strength-based philosophy is integrated throughout each chapter. In the new feature, "remember our superpowers," students remind us of what they are good at; the updated Information Processing Models now incorporate areas of strength; in each educational response section, we address the strengths of the students, and whenever we discuss working with families, we do so from a strength-based, family-centered, culturally responsive framework. Using a strength-based approach is not "just a nice thing to do" … it is a foundational mindset that is essential to supporting the success of students with exceptionalities.

Organization of the 15th Edition

This book is divided into three major sections. Part One provides the history and foundations of special education. Part Two deals with high-incidence exceptionalities (those experienced by more than 1 percent of the population). Part Three addresses low-incidence exceptionalities where students, whose needs are often quite complex, make up less than 1 percent of the general population.

We have intentionally structured Chapters 3–13 to build from understanding the students and the identification process through the educational supports and services needed to address their strengths and challenges. Each chapter introduces the reader to a few students whose strengths and challenges exemplify the chapter's area of exceptionality. We follow these students within the chapter to explore their needs and how we can support their success. In the educational response sections of the chapter, we see how specific strategies apply to these students. Our Educational Response shares the organizational structures (e.g., a continuum of services and MTSS) to support students. We also share specific curriculum and instruction strategies (e.g., Universal Design for Learning, High Leverage Practices, Evidence-Based Practices) to support student access to content standards. Please see the detailed table of contents for more information about text and chapter organization.

What's New in the 15th Edition?

With each edition, we get the chance to incorporate new features that can enhance learning for the reader. We are very excited about the new features for the 15e! Each new feature has been carefully chosen to bring an important perspective to the content in the chapter while updating the information with current knowledge, expertise, and understanding. The following are new features for the 15e:

Ask the Experts—within each chapter, an expert within our field addresses a hot topic and shares their wisdom with the next generation of teachers. These essays are written in a conversational tone, inviting the reader to explore key ideas and to learn from the best of the best. Experts include:

- Dr. Cathy Kea—Developing Cultural Competence
- Dr. Kristina Collins—Addressing Systemic Racism
- Dr. Kelly Carrero—Working with Young Culturally/Linguistically Diverse Learners
- Dr. Kristin Bjornsdottier—Setting High Expectation for our Students and Our Selves
- Ms. Tammy Day—Exploring College Programs for Students with Intellectual Disabilities
- Dr. Jennifer Nietzel—Supporting Families of Students with ASD
- Dr. Susan Boutilier—The Neurology Behind Learning Disabilities
- Dr. Emily King—Moving Beyond Checklists to Identify the Strengths and Needs of Students with ADHD
- Dr. Dennis Cavitt—The Importance of Self-determination
- Dr. Beverly Gerber—The Importance of the Arts as a Key Part of Services
- Dr. Dina Castro—Working with Culturally/Linguistically Diverse Families
- Ms. Liz Parrot—How Important a Personal Relationship with The Speech Language Therapies Can Be for a Child
- Dr. Tarek Grantham—Upstanders Confront Anti-Black Racism and Close Excellence Gaps for Gifted Black Males
- Dr. Elaine Gale—Infusing Deaf Adults in Early Intervention for Families
- Dr. David Edyburn—Using Technology to Support Students
- Dr. Joy Banks—Intersectionality and Hope for a More Inclusive Society

Each of these essays is designed to invite further conversation and provide a jumping off point for in class or online discussions and further investigations of the topics addressed.

High Leverage Practices—All of the new High Leverage Practices (HLP) (CEC/CEEDAR) have been included in the 15e. Each HLP appears within the chapter and topic where its application can best be seen. The full list of HLPs, and the chapter in which it appears, is included in the back of the text cover. Readers can refer to this list to see where in the text each practice is addressed. High Leverage Practices can be incorporated within classroom discussions and lesson-planning activities to explore their application in practice.

Remember Our Super Powers!!!—This feature captures the voices of students with exceptionalities as they share their "super powers." So often we focus on the challenges that students face without taking time to celebrate their strengths. This feature also provides a jumping off point for discussions of what happens when we think about students' strengths instead of focusing on their deficits.

Reaching and Teaching Students in Virtual Learning Environments—We have learned many lessons from the rapid pivot to online learning that resulted from COVID-19. In these short essays, Dr. Jennifer Job shares lessons from this pivot that we may want to carry forward; sharing ways we can incorporate more online learning opportunities for our students.

Mindfulness Matters—This special feature reminds us of the importance of the emotional climate of our schools and classrooms for supporting student success. Each chapter incorporates specific and practical strategies to nurture mindfulness. These strategies addresses: Mindful Listening; Mindful Learning Environments: From Chaos to Calm; Supporting Mindfulness with Young Children; Supporting a Calm Focus; Identifying Feelings; Managing Impulsivity; Calming the "monkey mind"; Dealing with Anger; Moving Beyond Words; Understanding the Neurology of Mindfulness; Connecting with Others; Using Sound to Focus the Mind; and Mindfulness of Personal Autonomy. The practice of mindfulness for students and teachers helps to create an environment of calm which supports learning. The concrete strategies offered in this section are designed to be implemented within a typical classroom and school.

Key Features Retained in the 15th Edition

In addition to the new features, we have kept our best loved features for the 15e. These features include:

Exceptional Lives Exceptional Stories—These vignettes share the experiences of children with exceptionalities and their families giving readers an important glimpse of what daily life maybe like for students and their families.

Moral Dilemmas—These short vignettes present the reader with issues that teachers often face and ask them to think about how they would handle these difficult situations. There are no "right" answers to these dilemmas, but in reflecting on them, the readers can clarify their own beliefs and values.

Future Challenges—The field of Special Education continues to evolve, and while we have made great strides, there are many challenges that we still face. This section shares some of these remaining challenges with the reader in hopes that they will help to address these challenges as they enter the field of special education.

Universal Design for Learning (UDL) Strategies for Content Standards— Chapters 3–13 share tables linking UDL strategies to content standards, showing how students can gain access to grade level curriculum benchmarks.

Information Processing Model—In the 15e, we continue to emphasize the information processing model (IPM) to show the key elements of learning: taking information in (input), thinking about it (central processing), and using it in some way (output); information processing also includes decision making (executive function) which oversees the learning process. All of this information is placed within the emotional context which influences how we process information (i.e., how we learn). Understanding how a child processes information allows educators to adapt learning environments, teaching strategies, and curriculum to address the child's strengths and challenges. Chapter 1 gives a detailed description of information processing model and Chapters 3–13 use the IPM to show the strengths and challenges for students within each area of exceptionality.

Multitiered Systems of Support (MTSS)—We use the MTSS approach (formally RtI) to show how coordinated services can be organized to facilitate greater collaboration between general and special education through tiered supports and services. MTSS is designed to strategically match supports and services with the intensity of student's strengths and challenges. Using this framework, we can provide extra support for students who do not need the intense and full services we provide through special education. We can also provide additional enhancements for children who need them. We present a three-tiered model: Tier I, focuses on solid supported access to the general curriculum to help students reach grade level benchmarks and enhanced experiences for students who have met benchmarks; Tier II, offers students targeted instruction, often using standardized materials and interventions, when they need additional support and or enhancements to meet with success; and Tier III is intensive and more individualized support and or enhancements for students. Many students with exceptionalities spend a large part of their school day within the general education classroom and tired services help to foster the collaborative support they need. Chapter 2 offers a full description of MTSS, and this model is used within the Educational Response sections of Chapters 3–13.

Diversity and Disproportionate Representation—Disproportionate representation of racially, culturally, and linguistically different, and economically disadvantaged, children within special and gifted education is a pernicious and persistent challenge. Within special education, we see an overrepresentation of Black, Indigenous, Latinx, and economically disadvantaged students in many areas of disability. This pattern is reversed within gifted education, where the same children are markedly underrepresented. Poverty, while certainly contributing to these patterns, does not fully explain them. In other words, the intersectionality of race ethnicity, language, culture, and gender all make unique contributions to the patterns of disproportionate representation that poverty alone cannot account for. In Chapter 2, we explore deeply the impacts that structural and systemic racism and implicit bias can have on decisions to identify, place, and discipline students. Within each chapter, we address the specific issues related to appropriate identification and services for students of color. (Please see our earlier discussion of respect for evolving language preferences.) We discuss the social, as well as educational consequences of policies and practices, and explore the role of culturally inclusive curriculum and family-centered approaches to create culturally responsive services for all children. In many chapters, we have invited experts to share their wisdom on how we can solve these pernicious problems. Because we have integrated this content within each chapter, throughout the book, we have placed a special icon showing where this important information is located within each chapter.

Specific Chapter Updates in the 15th Edition

Each chapter has been thoroughly updated reflect current research and practice. Here are the highlights for individual chapters:

Chapter 1: Children and Youth with Exceptionalities and Their Families

In Chapter 1, we meet students with exceptionality within the context of their families. We explore child development across the lifecourse and examine the role of families in supporting their child's success. We discuss importance of cultural competence to building strong family partnerships and look at how school and family relationships were impacted by the COVID pivot to online learning. The challenges of disproportionality of students of color in identification and services are discussed in-depth.

Chapter 2: Children and Youth with Exceptionalities and Social Institutions: Government, Courts, and Schools

This chapter examines social and cultural influences on student outcomes within a bioecological focus of human development. The predominant influences from society come from the institutions of government, the courts, and the schools and each of these plays a role in shaping student outcomes. We have added deep discussion of how structural racism and implicit bias can impact students with exceptionalities and their families. We present ways to organize schools around a strength-based approach that moves from "inclusion" to "belonging" across a continuum of supports and services (including Multitiered Supports and Services).

Chapter 3: Early Intervention Supports and Services

In Chapter 3, we explore the importance of early intervention supports and services to optimize outcomes for children. We have extended our discussion of family-centered culturally responsive practices to build strong partnerships, specifically with bilingual families. We have expanded our focus on early childhood mental health care and the use of MTSS frameworks to address social and emotional needs of young children and added a discussion of the impacts of early trauma on child development. We have also added a new section on the Division of Early Childhood (CEC) recommended practices.

Chapter 4: Children and Youth with Intellectual Disabilities

Chapter 4 has been refocused with a strength-based approach to supports and services and the setting of personally challenging learning objectives for each student. The new AAIDD definition and classifications of support are presented and an in-depth discussion of the role of cultural biases in interpreting "adaptive behaviors" has been added. Instruction sections include all new evidence-based practices and strategies for acquisition, fluency, maintenance and generalization

of knowledge and skills. A new discussion of the role of person devices (e.g., cell phones, tablets) as part of assistive technology has been added.

Chapter 5: Children with Autism Spectrum Disorders

Chapter 5 opens with a conversation about the changing preferences for terminology within the ADS community… person first or Autism first? The chapter has been refocused around strength-based approaches to supports and services for student's success. An all-new evidence-based practices section drawing on the National Clearinghouse on Autism has been included and research-based predictors of successful transition to postsecondary experiences have been added.

Chapter 6: Children and Youth with Learning Disabilities

Chapter 6 takes a new look at the neurological differences in structure and function of the brains for students identified with learning disabilities. We discuss the appropriate identification of student who are emergent English speakers. In the educational response section, we examine the interrelated relationship between academic and social/behavioral supports to the success of students with LD. Sections on accommodations and modifications; assistive technology; evidence-based practices; and transition services have all been updated.

Chapter 7: Children and Youth with Attention Deficit/Hyperactive Disorders (ADHD)

In Chapter 7, we take an updated look at the role of executive function in students with Attention Deficit Hyperactive Disorders (ADHD) and the neurological differences in structure and function of the brain. We look at the patterns of identification across gender, race, and ethnicity and discuss the comorbidities often associated with ADHD. In the educational responses section, we discuss multimodal treatment options to support students.

Chapter 8: Children and Youth with Emotional and Behavior Disorders

The strength-based focus of Chapter 8 includes a new look at the bioecological context on human development and the correlated constraints that influence the lifecourse of students with EBD. We discuss the problems inherent in the IDEA definition of EBD and the role implicit biases can play in identification. We have added a discussion of the importance of developing positive self-concept, self-esteem, and self-efficacy within a wrap-around approach to supporting students with EBD.

Chapter 9: Children and Youth with Communication, Language, and Speech Disorders

In this chapter, we examine how the strengths and challenges of children can be addressed through collaborative interdisciplinary teaming. Special emphasis is given to the bilingual and bicultural needs of children with language differences and the cultural competence needed to work with their families. Updated sections

include the use of assistive technologies and augmentative communication systems and the role of siblings as communication partners.

Chapter 10: Children and Youth with Gifts and Talents

In this chapter, we explore how gifts are identified and how we can respond to the student's educational needs. We have added new discussions on the underrepresentation of students from Black, Lantinx, Indigenous, and economically disadvantaged families within gifted education programs. We examine the roles of systemic racism and explicit bias on identification practices and the importance of developing cultural competence to address these issues. We review the use of multiple types and sources of information across multiple time-periods to strengthen identification practices and the need for nurturing programs to support the development of potential.

Chapter 11: Children and Youth Who Are Deaf or Hard of Hearing

This chapter opens with a discussion of Deaf cultural and the preference of some members of the Deaf community to drop the "person first" language out of respect for individuals and the "Deafhood." This ongoing discussion reflects the importance of words and the meaning they carry. The chapter includes an updated section on early intervention and the importance of integrating Deaf adults as part of the support team. We further examine the need for bilingual and bicultural support for students who are deaf or hard of hearing and their families. In the educational response section, we review new methods for teaching reading and the positive data these practices show on student outcomes.

Chapter 12: Children and Youth with Visual Impairments

Chapter 12 includes a new section on culturally and linguistically diverse students and their families. We have updated the section on the important role that special schools can play in supporting students with visual impairments, their families, and their teachers. The assistive technology section is updated, and there is a new section on student's transition to independent living as they learn to "adult."

Chapter 13: Children and Youth with Physical Disabilities, Health Impairments, and Multiple Disabilities

Chapter 13 looks at the importance of full and meaningful inclusion and building communities of belonging. We explore the role of intersectionality looking at gender, ability status, race, language, and socioeconomic levels on identify formation and on how we as teachers perceive our students. We have extended the discussion on student who are Deafblind to address concerns about touch-therapies like hand-over-hand and the need to respect personal bodily control and autonomy for all individuals. We have new section on self-determination, which also addresses personal autonomy. In the educational response section, we have added a new and extensive discussion of Comprehensive Literacy and the importance of reading instruction for all students. The assistive technology and augmentative communications sections have been updated.

15th Edition Special Features to Support Student Learning

In each chapter of the 15e, we have included pedagogical features that are designed to help students master the course content while enhancing their learning. These learning support features include:

Chapter Focus Questions—Each chapter begins with a set of focus questions that alert the reader to what they will be learning about within the chapter. The chapter follows the order of these questions, providing an outline for the chapter content. If students can give thoughtful answers to the focus questions, they are well on their way to understanding children with exceptionalities and their families.

Visual Icons (CEC Standards, Brain, MTSS, Super Powers, HLP, Diversity, Content Standards, Mindfulness Matters, Exceptional Lives Exceptional Stories, Ask the Experts, Reaching and Teaching, Moral Dilemmas)—These icons offer a quick visual reference to important content areas that are addressed within each chapter. They alert the reader to the content and act as a visual reminder that this content is part of a larger thread of knowledge addressed throughout the text.

TeachSource Video Connections—This feature shares footage from the classroom to place key chapter content within real-life scenarios. Critical-thinking questions help the reader reflect on the content in the video and extend the application of the information presented.

Digital Downloads—These are practical tools that students can access online (e.g., figures, tables, boxes, teaching tips, expanded coverage of UDL and MTSS). Downloads can be used as references during classroom discussions, assessments, and lesson planning. They may also form the basis of portfolio artefacts that can support practical application of information during student teaching. Look for the Digital Download label that identifies these items: **TeachSource Digital Download**

Margin Websites—In each chapter, we have selected key websites which offer extended resources for the reader. These are reliable sources of information where readers can pursue additional information on topics of special interest.

Key Terms—Words that appear in **bold text** highlight important vocabulary. These words are defined in the glossary at the back of the book.

Chapter Summary—These summaries highlight key concepts addressed within the chapter; helping the reader anchor learning by recapping the major points covered.

Relevant Resources—Provided at the end of each chapter these resources can be used to support further learning for readers who wish to pursue an area of interest in more depth.

Ancillaries

Supplemental Materials to Aid Teaching and Learning

This edition offers an expanded and enhanced package of online support material for students and instructors. Instructor assets include an Instructor's Manual, PowerPoint® slides, and a test bank powered by Cognero®. These supplemental materials were prepared by Dr. Jennifer Job, who also worked closely on the revision

of the 15th edition. Her area of expertise is curriculum and instruction, and she was a graduate student with the authors during her PhD studies. Additional instructor assets include an Educator's Guide. Sign up or sign in at **www.cengage.com** to search for and access this product and its online resources.

MindTap™: The Personal Learning Experience

MindTap for Gallagher/Coleman/Kirk, *Educating Exceptional Children*, 15e, is a fully customizable online learning platform with interactive content designed to help students learn effectively and prepare them for success in the classroom. Through activities based on real-life teaching situations, MindTap elevates students' thinking by giving them experiences in applying concepts, practicing skills, and evaluating decisions, guiding them to become reflective educators.

Acknowledgments

When Cengage contacted me to discuss the creation of the 15e of *Educating Exceptional Children,* I knew I faced a critical decision. I joined the author team in 2004 on the 11e and worked closely with my mentor, Dr. James Gallagher, on each ensuing edition. The 15e would be the first revision since his death in 2014. The prospect of taking on the 15e felt overwhelming. How could I take this on by myself… how could I do this alone?

Soon after my initial wave of anxiety, I realized that I would not be "alone." One of the major themes of the 14e had been "it takes a team," something that both Dr. Gallagher and I firmly believe; very little, of importance, that we accomplish is ever done alone! As this understanding came back to me, I realized that I would *not* be undertaking the 15e alone… far from it. My gratitude goes out to the following people who have been part of the team that was so instrumental in the creation of the 15e:

- Dr. James J. Gallagher, for mentoring me for over thirty years and preparing me to carry the work forward.
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- Dr. Elaine Gale, for your strong voice which ensures that the needs and rights of children who are deaf get heard
- Dr. David Edyburn, for your passionate commitment to creative ways to support student success through technology and for your friendship over the years
- Dr. Joy Banks, for the grace you bring to difficult situations and the wisdom you model in the face of adversity

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It takes a team, and I am grateful beyond measure to this outstanding team. The 15e is better because of each of you!

Thank you,
Mary Ruth Coleman

About the Authors

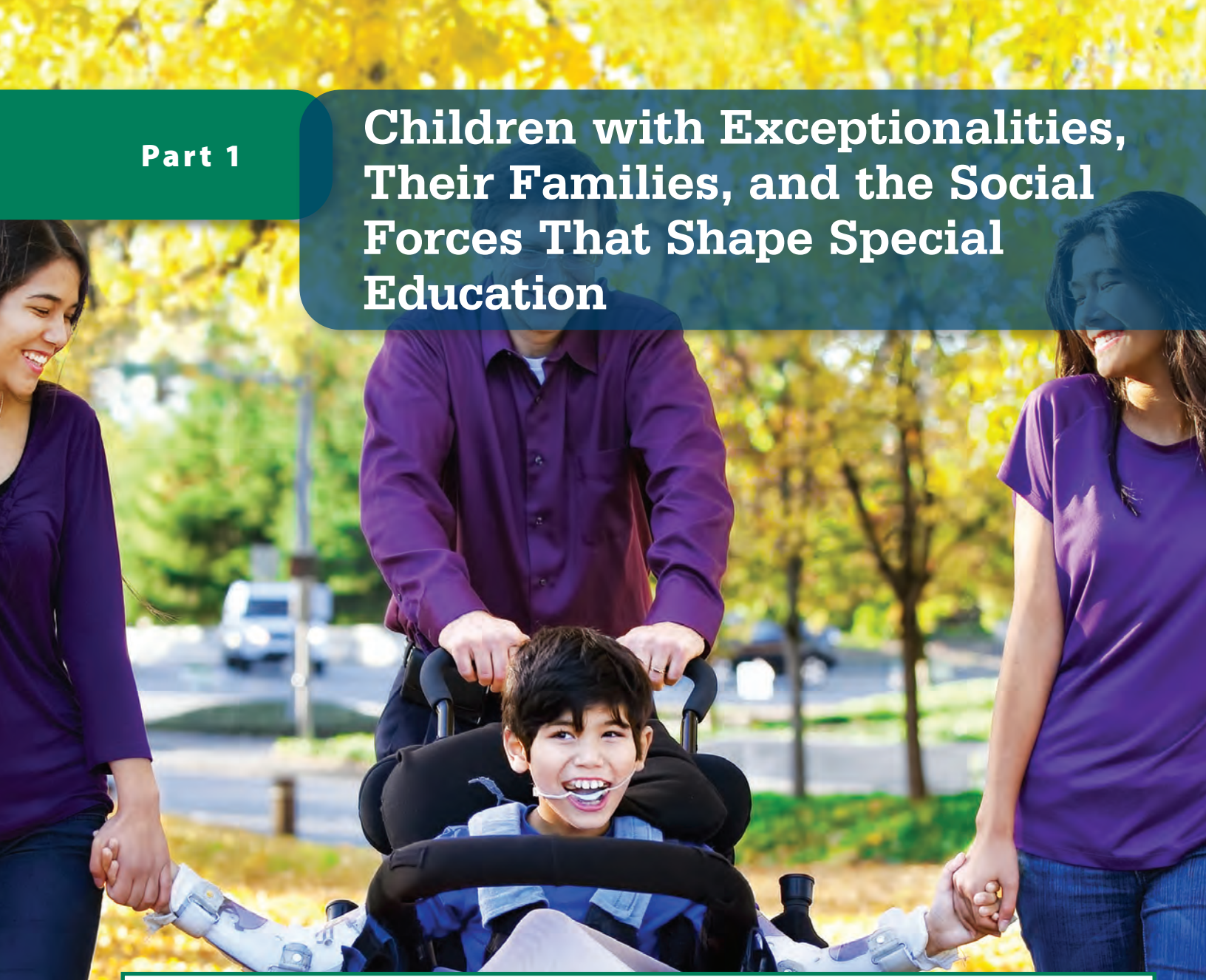
James J. Gallagher, PhD, (late) was a senior scientist emeritus and former director of FPG Child Development Institute, which he had been affiliated with since 1970. Prior to joining FPG, Dr. Gallagher was the first Chief of the Bureau of Education for the Handicapped in the U.S. Office of Education. He oversaw a wide range of new legislation representing the first major thrust by the federal government to help children with disabilities. The bureau was the leader in helping to implement laws that provided funds for research, personnel preparation, technical assistance, regional resource centers, centers for media development, and state grants to help with the education of children with disabilities. He was promoted to Deputy Assistant Secretary for Planning, Research, and Evaluation during the tenure of Commissioner Jim Allen. Dr. Gallagher also served as the assistant director of the Institute for Research on Exceptional Children at the University of Illinois at Champaign-Urbana. Dr. Gallagher has produced over 200 articles in a wide range of professional journals. He has also authored and edited a number of book chapters and books.

Mary Ruth Coleman, PhD, is Senior Scientist Emeritus, at the FPG Child Development Institute at the University of North Carolina at Chapel Hill. She directs Project U-STARS~PLUS (Using Science, Talents, and Abilities to Recognize Students~Promoting Learning in Under-served Students) and was the principal investigator on Project ACCESS (Achievement in Content and Curriculum for Every Student's Success). She was the coprincipal investigator for the Early Learning Disabilities Initiative sponsored by the Emily Hall Tremaine Foundation. She has served three terms on the board of directors for the Association for the Gifted (TAG), one of which she was president; three terms on the board of the National Association for Gifted Children (NAGC); and two terms on the board of directors for the Council for Exceptional Children (CEC). She was president of the Council in 2007. She has published over 150 articles, chapters, and curriculum materials.

Samuel Kirk, PhD, (late) is the founding author of *Educating Exceptional Children*. He earned his doctorate in clinical psychology from the University of Michigan in 1935, which led to sixty years of work and research. He developed the term "learning disabilities" in the 1960s, after years of observation during work with teenagers with ID in Chicago and a training school in Ann Arbor. President John Kennedy named him as the director of the Federal Office of Education's Division of Handicapped Children, and Dr. Kirk was instrumental in convincing the government to provide funding for training teachers to work with students with special needs. He was also the founding director of the Institute for Research on Exceptional Children at the University of Illinois. He ended his career at the University of Arizona.

Part 1

Children with Exceptionalities, Their Families, and the Social Forces That Shape Special Education



Jaren Jai Wicklund/Shutterstock.com

The purpose of this book is to introduce you to individuals with exceptional educational needs. As an educator, you will meet many students with exceptionalities, and you will play a key role in their success. Whether you plan to teach in general education, teach in special education, or specialize in speech pathology, school psychology, or educational administration, you will be part of a team that works with students and their families. Throughout this book, you will learn how to nurture, recognize, and respond to the strengths and needs of students with exceptionalities and how to support their accomplishments across their lifecourse. The exciting thing is that you will be prepared to make a difference in the lives of many students!

In this first section, we take a close look at who children and youth with exceptionalities are. We explore the causes of exceptionality and the importance of families as partners in their child's success. We will review the rich history of special education over the past six decades, and we will learn about the social forces that play a significant role in child development and in special education policies and practice. In Chapter 1, we focus on children and youth with exceptionalities, their families, and the social environments that surround them. We will explore the intersectionality of race, ethnicity, economic inequities, and disability for the individual and for society. In Chapter 2, we examine the impact of three major social institutions on children and youth with exceptionalities: the government, the courts, and the schools. What you learn in Chapters 1 and 2 will provide the foundation for understanding the specific strengths and needs of the students with exceptionalities you will meet in the rest of the chapters. We welcome you as you join the team to support students with exceptionalities and their families!

Chapter 1

Children and Youth with Exceptionalities and Their Families

Standards Addressed in This Chapter

CEC

The inside book cover list the Council for Exceptional Children 2020 Intitial Practice-Based Professional Development Standards for Special Educators (K-12).
Standards 1, 2, 5, 6, and 7 are addressed in this chapter.

Focus Questions

1-1 Who are children and youth with exceptionalities?

1-2 How can the information processing model (IPM) help us understand and support the unique strengths and challenges of individuals with exceptionalities?

1-3 What are some of the major causes of exceptionalities?

1-4 What is significant disproportionality and how does it impact students with exceptionalities?

1-5 In what ways do culture (e.g., race and ethnicity) and socio-economic status intersect with the family system and identity formation to influence the development of individuals with exceptionalities?

1-6 Why are family-centered approaches so critical for supporting each child's success across their lifecourse?

It's not easy being different. We have all felt the sting of not belonging, of not feeling a part of the group. We have all felt overwhelmed when asked to do things beyond our skills and capabilities, and bored when asked to do simple things that do not challenge us. Of course, being different is not all bad—it is also what makes us interesting; each of us has strengths and challenges, and the specific patterns of these make us uniquely who we are.

Some differences, however, impact how we learn: how we receive information through our senses; how we express our thoughts, needs, and feelings; and how we process information. Special adaptations in the education program are necessary to support our success when our differences impact how we learn. Everyone needs and deserves an educational environment where their differences are honored and addressed. And as educators, our job is to support individuals with special educational needs across a variety of environments to ensure that being different does not mean being left behind or left out!

kali9/E+/Getty Images

1-1 The Child with Exceptionalities: An Overview

Who is the child with exceptionalities? If we define a child with exceptionalities as one who differs in some way from a group norm, then many children are exceptional. A child with red hair is "exceptional" if all the other children in the class have black, brown, or blond hair. A child who is a foot taller than their peers is "exceptional." But these differences, though interesting to a geneticist, are of little concern to the teacher. Educationally speaking, students are not considered "exceptional" unless our typical educational supports and services must be modified to help them be successful. If a child's exceptionalities mean additional support to read is needed, or if the child is so far ahead that they are bored by what is being taught, or if they are unable to adjust to the social needs of the classroom, then special educational responses become necessary. Our responsibility, as educators, is to match our educational supports and services with the strengths and needs of each child in order to develop their unique capabilities.

Individuals with exceptionalities help us better understand human development. Variation is a natural part of humanity and through working with children who have exceptionalities, we learn about the many ways that all children develop and learn. In this way, we develop our teaching skills and strategies to better meet the needs of all students. We also come to understand that while differences make the child unique, the child with exceptionalities is a child first and shares the same basic needs as all children.

1-1a Educational Areas of Exceptionalities

A child with disabilities in thirteen different legal categories can be eligible for special education services (see Table 1.1). These categories are outlined in the Individuals with Disabilities Education Improvement Act of 2004, generally known as IDEA, an important piece of federal legislation (discussed in detail in Chapter 2). The definitions in the table are given in technical language, but they are the best descriptors we have for each area of exceptionality. Through case studies and vignettes in the chapters ahead, we will meet students who live with these disabilities. We will also come to see how we can support each child's success.

Kali Nine LLC/E+/Getty Images

There are children with exceptionalities in almost every classroom in the country.

You may have noted that attention deficit disorder/attention deficit with hyperactivity disorder (ADD/ADHD) is not listed as its own category in special education. It is, however, included under Other Health Impairment; this will be discussed in Chapter 7.

You may have also noticed that children with special gifts and talents are not included in Table 1.1. This is because the federal legislation that generated this list, does not address children with special gifts and talents. While there is no federal definition of students with gifts and talents, the National Association for Gifted Children (NAGC) offers the following definition:

> Students with gifts and talents perform—or have the capability to perform—at higher levels compared to others of the same age, experience, and environment in one or more

Table 1.1 Disability Categories under IDEA (2004)

Below are definitions of specific disability categories recognized for special education, as well as how many children they affect. These are federal terms and definitions.

1. Autism Incidence: 1.08% 1 in 100	A developmental disability significantly affecting verbal and nonverbal communication and social interaction, generally evident before age three, that adversely affects a child's educational performance.
2. Deafness Incidence: 0.17% Less than 2 in 1,000	A hearing impairment so severe that a child is impaired in processing linguistic information through hearing, with or without amplification, that adversely affects a child's educational performance.
3. Deaf-Blindness Incidence: less than 1 in 10,000	A combination of hearing and visual impairments that causes such severe communication and other developmental and educational needs that they cannot be accommodated in special education programs solely for children with deafness or children with blindness.
4. Emotional Disturbance Incidence: 0.52% Less than 1 in 100	A condition exhibiting one or more of the following characteristics over a long period of time and to a marked degree that adversely affects a child's educational performance: **a.** An inability to learn that cannot be explained by intellectual, sensory, or health factors. **b.** An inability to build or maintain satisfactory interpersonal relationships with peers and teachers. **c.** Inappropriate types of behavior or feelings under normal circumstances. **d.** A general pervasive mood of unhappiness or depression. **e.** A tendency to develop physical symptoms or fears associated with personal or school problems. The term includes schizophrenia. The term does not apply to children who are socially maladjusted, unless it is determined that they have an emotional disturbance.
5. Hearing Impairment Incidence: 0.10% 1 in 1,000	An impairment in hearing, whether permanent or fluctuating, that adversely affects a child's educational performance but is not included under the definition of *deafness*.
6. Intellectual Disability Incidence: 0.92% About 1 in 100	Significantly subaverage general intellectual functioning, existing concurrently [at the same time] with deficits in adaptive behavior and manifested during the developmental period, that adversely affects a child's educational performance.
7. Multiple Disabilities Incidence: 0.19% 2 in 1,000	Concomitant [simultaneous] impairments (such as intellectual disability–blindness, intellectual disability–orthopedic impairment, etc.), the combination of which causes such severe educational needs that they cannot be accommodated in a special education program solely for one of the impairments. The term does not include Deaf-Blindness.
8. Orthopedic Impairment Incidence: 0.05% 5 in 10,000	A severe skeletal impairment that adversely affects a child's educational performance. The term includes impairments caused by a congenital anomaly, impairments caused by disease (e.g., poliomyelitis, bone tuberculosis), and impairments from other causes (e.g., cerebral palsy, amputations, and fractures or burns that cause contractures).
9. Other Health Impairment Incidence: 1.62% Less than 2 in 100	Having limited strength, vitality, or alertness, including a heightened alertness to environmental stimuli, that results in limited alertness with respect to the educational environment: **a.** due to chronic or acute health problems such as asthma, attention-deficit disorder or attention-deficit hyperactivity disorder, diabetes, epilepsy, a heart condition, hemophilia, lead poisoning, leukemia, nephritis, rheumatic fever, sickle cell anemia, and Tourette syndrome; and **b.** adversely affecting a child's educational performance

(Continued)

Table 1.1 Disability Categories under IDEA (2004) (Continued)

10. Specific Learning Disability Incidence: 3.57% About 1 in 30	A disorder in one or more of the basic psychological processes involved in understanding or in using language, spoken or written, that may manifest itself in the imperfect ability to listen, think, speak, read, write, spell, or do mathematical calculations.
11. Speech or Language Impairment Incidence: 1.64% Less than 2 in 100	A communication disorder such as stuttering, impaired articulation, a language impairment, or a voice impairment that adversely affects a child's educational performance.
12. Traumatic Brain Injury Incidence: 0.04% 4 in 10,000	An acquired injury to the brain caused by an external physical force, resulting in total or partial functional disability or psychosocial impairment, or both, that adversely affects a child's education performance. The term does not apply to brain injuries that are congenital or degenerative, or to brain injuries induced by birth trauma.
13. Visual Impairment Including Blindness Incidence: 0.04% 4 in 10,000	An impairment in vision that, even with correction, adversely affects a child's educational performance. The term includes both partial sight and blindness.

Source: Individuals with Disabilities Education Improvement Act of 2004, Public Law 108–446, U.S. Department of Education, Washington, D.C.

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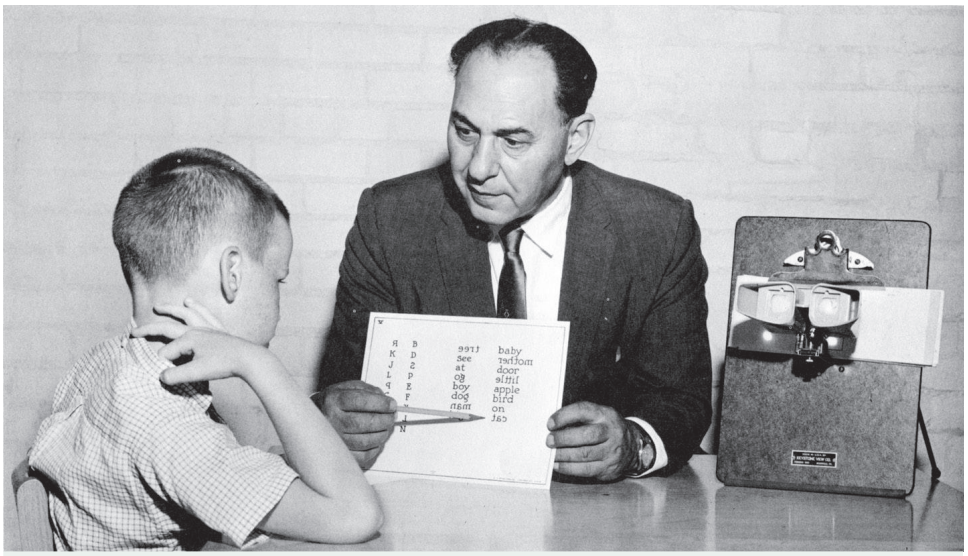
> domains. They require modification(s) to their educational experience(s) to learn and realize their potential. Students with gifts and talents come from all racial, ethnic, and cultural populations, as well as all economic strata; require sufficient access to appropriate learning opportunities to realize their potential; can have learning and processing disorders that require specialized intervention and accommodation; and need support and guidance to develop socially and emotionally as well as in their areas of talent. (NAGC, 2021)

Students with gifts and talents do have special needs (discussed in Chapter 10). They need to escape from boredom with the typical curriculum and be motivated to use their talents to the fullest. Every student has the right to reach their potential; this is the foundational principle of **strength-based educational approaches**.

Educators take identification of students with exceptionalities quite seriously, because this identification leads to the educational supports and services to platform student success. Appropriate identification allows us to match supports and services to the student's specific strengths and needs. If we know, for example, that a child has a specific learning disability in reading, we know what interventions should be put in place to support that child. There are also economic impacts for appropriate identification. Students who are formally identified as having disabilities (as defined in Table 1.1) can receive support from specialized personnel. These supports and services are provided through funds from the federal, state, and local governments; because of this, identification for special education services is a legal decision with policy and economic implications as well as educational impacts.



Courtesy of the University of Illinois Archives

Dr. Sam Kirk—a key figure in the beginnings and organization of special education, original author of this text, and director of the Institute for Research on Exceptional Children at the University of Illinois, 1948–1966.

1-1b Interindividual and Intraindividual Differences

Children with exceptionalities are different in various ways from other children of the same age. These differences between children are called **interindividual differences**, and they can present educators with many challenges. What sometimes goes unnoticed is that some students also show substantial **intraindividual differences** as well. Intraindividual differences are variances that occur within a single child, and understanding each child's unique pattern of strengths and challenges can help us develop individualized approaches to their instruction. For example, Jason, who is 9, has the intelligence of an 11-year-old but the social behavior of a 6-year-old; both exceptionalities need to be addressed. One reason we need an **individualized education program (IEP)** for each student with exceptionalities is that their intraindividual differences must be addressed as much as their interindividual differences are. The individualized education plan will be discussed in greater detail in Chapter 2 and will also be addressed in each subsequent chapter. The ability to process information is one way to think about each individual's pattern of strengths and challenges.

TeachSource Video Connection

Inclusion: Grouping Strategies for the Classroom

Watch the video, "Inclusion: Grouping Strategies for the Classroom." In this case, you will see a fifth grade classroom where a teacher uses small groups to provide appropriate learning opportunities for typical children and for children with special needs. The teacher collaborates with specialists to individualize the lessons focused on a shared topic. As you watch this video, what do you notice about the collaboration between these teachers? How is the lesson enhanced by having specialists involved?

Watch online

1-2 Using the Information Processing Model to Understand Students with Exceptionalities

The **information processing model (IPM)** helps us understand both how students learn and what can happen to learning when there are problems with processing information (see Figure 1.1). We will use the IPM throughout the text to reflect on the problems students with exceptionalities often encounter with learning and to examine where their strengths with learning can be found.

1-2a The Information Processing Model

The information processing model helps us think about the complexities of how people learn, exploring the various components of learning that can be impacted by an educational exceptionality. Information processing explains how students interact with and respond to the world around them and describes how they learn through this engagement. Understanding how students learn is really important because, as educators, learning is our primary goal!

So, what happens when students are learning? First, they receive information from their senses through input (visual, auditory, etc.). Next, they process this information using classification, reasoning, and evaluation (this is often what we mean by "thinking about it"). Processing information also involves memory, where students assign information to either **short-term memory** or **long-term memory** to store it for later use. The more deeply students process information, the more likely they are to remember it so they can use it when they need it. Finally, they respond to information through output, or doing something with the information, such as speaking, writing, or using it physically. Students' output is often how we determine that they have indeed "learned" the information we are teaching. Students are aided in processing information by their **executive function**, or a decision-making ability. Their executive function allows them to choose what information to focus on (input), which involves attending and

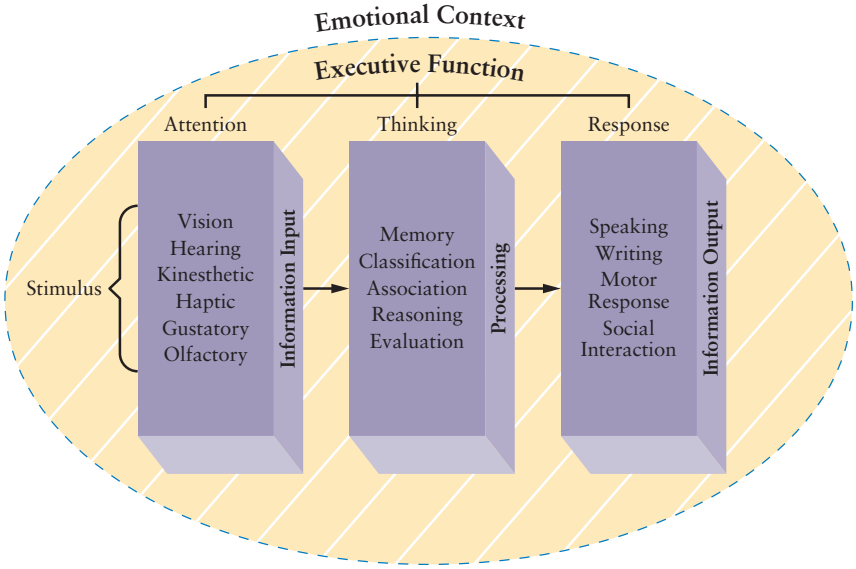


Figure 1.1 Information Processing Model

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working memory, how to interpret this information (processing), and which options to use in response to this information (output) (Center on the Developing Child, 2016).

Information processing takes place within an overall **emotional context** that influences every aspect of the system: input, processing, output, and executive function. The emotional context is critical for learning. When the emotional tone is hostile, or the classroom climate is stressful, then learning becomes more difficult. When students feel anxious, stressed, or fearful, their ability to learn is greatly diminished (Center on the Developing Child, 2016). If a student has met with repeated failures with prior learning, they may experience **anticipatory anxiety** in new but similar learning situations. Anticipatory anxiety undermines the student's success with the new learning, and the cycle of failure can become a self-fulfilling prophecy.

Using the IPM, we can see not only where the student has difficulties, but also where they have strengths. Some students are very good with visual memory—when they see the information, they "get it"—while others are better with auditory processing and prefer to hear the information. Many students seem to learn best when they interact with information in a concrete way using their kinetic senses or when they use multiple methods for input (seeing, hearing, and doing) simultaneously.

Think about how you like to learn novel or complex information, like a new computer software program. How would you like to access information? How would you like to process that information? What would you like to do to show that you had learned the information? Your answers to these questions show you which areas of information processing are your natural strengths. You might also want to reflect on your least favorite ways of learning…these would show you the areas that you may experience difficulties with learning if they are the only way you can access information. Can you also imagine that these difficulties would be compounded if you are stressed, say by a deadline that is really tight? The emotional context for your learning will impact your success!

Special education services are often required when a student is unable to process information effectively. The problems of a student may be in the *input* of information (e.g., visual and auditory); the internal *processing* of that information (using memory, reasoning, or evaluation); or in the *output*, responding to the information. The *executive function* can also be problematic with attending and decision making, and this creates difficulties across the information processing system. The good news is that when we know where the problems with processing are, we can readily determine how to bypass and/or augment the student's areas of difficulty, using their areas of strength, to support learning!

In each of the following chapters, we will present the information processing model and show which elements may be impacted by the exceptionality under discussion as we explore how to help each child meet with success.

1-3 Major Causes of Exceptionalities

Exceptionality may stem from environmental and/or hereditary causes and is most often the result of complex interactions across both. An exploration of the roles of heredity and environment can help us recognize the origins of various kinds of exceptionality. We must understand, however, that in some cases we will not be able to determine the specific reasons a child is born with or later develops exceptionalities. Whether or not we are able to link the child's exceptionalities to specific causal origins, the most critical thing is that we fully accept each child's unique expression of who they are, including their exceptionalities.

Both heredity and environment play a role in shaping each child's development.

1-3a The Interaction of Heredity and Environment

Few topics stimulate more fascination than the question of how we become who and what we are. What forces shape our development and sequentially build a confident and complex adult from an apparently helpless infant? For many decades, we have been aware of the effects that both heredity and environment have on the developing child. Because it is the job of educators to change the environment of the child through instruction, we have often ignored the role of heredity. But recent dramatic progress in the field of genetics makes the influence of heredity impossible to ignore.

Historically, we have been through three major stages in our belief systems about the relative influence of heredity and environment, and each stage has had a profound effect on what we do as educators. Up until about 1960, it was strongly believed that heredity alone drove and determined various conditions related to intelligence, such as mild intellectual disability, giftedness, or mental illness. Our beliefs about the potency of heredity led us to conclude that it was more or less impossible to change a child's trajectory, and so the role of educators was seen as helping individuals adapt as well as possible to their hereditary roll of the dice (Waski & Bryant, 2019). We discuss this trajectory more in Chapter 2.

In the 1960s, there began a major movement emphasizing the important role played by *environment* in human development. This movement recognized that many exceptionalities could actually result from or be intensified by various environmental conditions. Researchers reasoned that mild developmental disabilities could actually be caused by lack of early stimulation, and special gifts and talents might emerge only because the environment for some children was incredibly favorable. Educators were encouraged to try to find ways to reverse unfavorable impacts of environmental effects and to encourage favorable outcomes through education (Ramey, 2019).

Around 1990, a similar shift in the view of the relative roles of heredity and environment took place. The emphasis was placed on the progressive *interaction between heredity and environment* and the resulting effects of those interactions. Indeed, Gottlieb (1997) proposed that by changing the environmental conditions of early childhood, we could activate different patterns of genes, which then would influence behavioral changes. Our growing understanding of genetics seems to be proving him correct!

Recent genetic research has made it clear that many conditions that lead to exceptionality are linked to interactions between genes (or our hereditary DNA) and our environment. Conditions such as fragile X syndrome (Bailey, 2021) intellectual and developmental disabilities (IDD), attention-deficit hyperactivity disorder (ADHD), and dyslexia are all seen to have strong genetic components (Wadsworth et al., 2015), yet all can be positively influenced by favorable environments.

Some of the most dramatic scientific breakthroughs have been made by the Human Genome Project. The goals of this international project were to determine the complete sequence of the three billion DNA subunits (bases) and to identify all human genes, making them accessible for further biological study (Gilssen et al., 2014). The U.S. Department of Energy and the National Institutes of Health were the U.S. sponsors of this work. The initial goal—identifying the entire human genome—was reached in 2003, and the subsequent research projects based on this work include a number of findings related to children with exceptionalities.

Human Genome Project
www.genome.gov/human-genome-project

As our ability to identify specific genes has increased, we have become interested in gene-environment interaction. We now know that some of the earlier questions we asked were oversimplified (e.g., which gene causes which outcome?), and we have a more sophisticated understanding of the interaction between genes and environmental experiences that influence outcomes. We now understand that:

a. Genes do not control behavior directly;
b. Almost all behavioral traits emerge from complex interactions between multiple genes and environments; and

c. The causes of personality and ability are found across complex neural networks—not in a single location in the brain (with the exception of extreme causes of focal brain lesions) (Munafo & Flint, 2011).

When we look at the interaction of genes with environment more closely, we can see that negative environments in combination with high-risk genes are more likely to lead to negative outcomes, while positive environments with low-risk genes most often lead to positive outcomes (see Figure 1.2). Note the red arrow in Figure 1.2; this indicates an intervening variable that changes the expected outcome. Intervening variables may include things like a sympathetic teacher or other adult who plays a supportive role.

In short, we cannot say, for example, that an individual gene causes depression or ADD/ADHD, but rather that the complex mix of environmental influences and multiple genes can result in some unfavorable outcomes. Since at this point we can do little about the genes we inherit, we continue to concentrate on intervening within the environment to improve educational and social outcomes for children (Bergin & Bergin, 2019).

1-3b Prevalence: How Many Children with Exceptionalities Are There?

Establishing the prevalence—how many students with exceptionalities there are—may seem at first glance to be fairly easy; one either has the exceptionality (autism or learning disability or emotional disturbance) or one does not. In reality, however, things are not that simple. There is a gradual continuum of strengths and needs within every category of exceptionality, and deciding who along these continuums will receive additional supports and services is not always clear-cut. Qualifications for each area of exceptionality are established by "cut-off points" that have been determined by educational, medical, and psychological professionals charged with identifying children with exceptionalities. The children on either side of this cut-off point, however, are very similar to one another. And students who have just missed the cut-off point for formal identification often still need

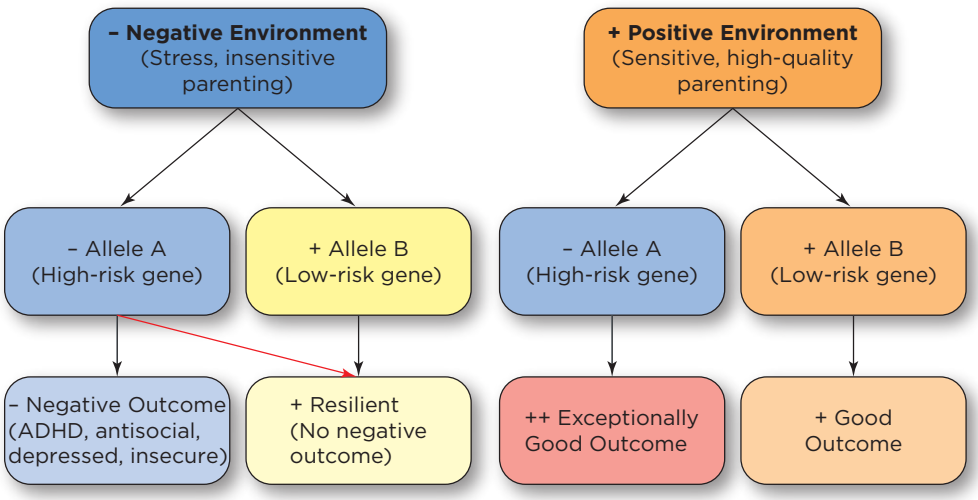

Figure 1.2 Genes and Enviroment Interact to Influance Child Outcomes
Source: From FREBERG. Discovering Biological Psychology, 2E.

additional support to be successful. We are also aware that there are likely many students with exceptionalities who are never formally identified for services. In spite of these challenges, we must attempt to determine how many students with exceptionalities there are so that we can plan to meet their needs.

A reasonable estimate is that 7.1 million children in the United States can be classified across the categories of exceptionality (OSEP, 2021). This estimate is obtained by aggregating the reports from the fifty states. This means that approximately one out of about every ten children is *exceptional,* using the definitions for areas of disabilities given in Table 1.1. This high number of students is one reason for the extensive attention given to children with exceptionality in our school systems today. As noted above, these figures must be considered as only estimates, because while they reflect all identified students, they do not account for students whose exceptionalities have not been identified.

Children with disabilities are not distributed equally across the defined categories—far from it! Figure 1.3 gives a breakdown of the six high-incidence categories of disabilities. The term **high-incidence disabilities** includes the categories

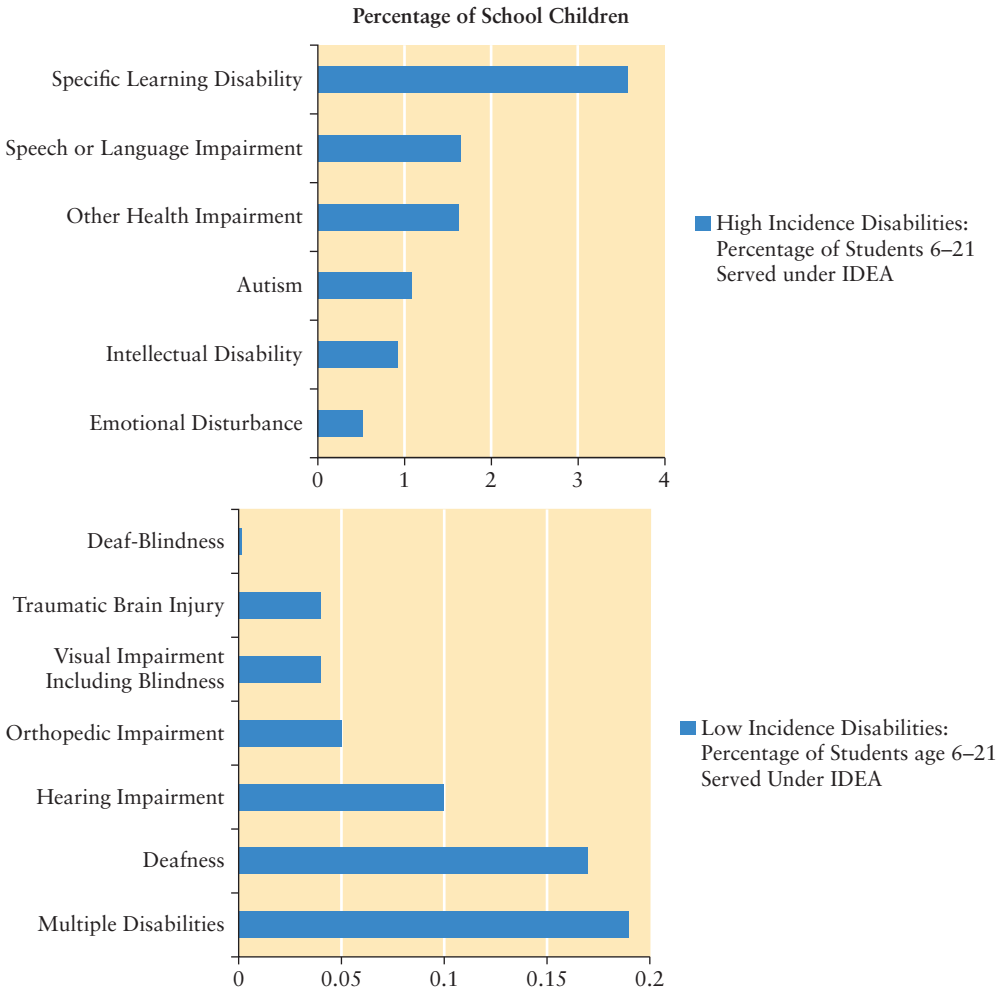

Figure 1.3 Prevalence of High and Low Incidence Disabilities
Source: Data Accountability Center. (2013). *Part B child count (2011)* [data set]. Retrieved from https://www.ideadata.org/arc_toc13.asp#partbLRE

of disability that are most prevalent, composing at least 1 percent of all students within the school population.

The prevalence of children in the gifted category is not included here because gifts and talents are not included in the federal legislation from which these figures are derived. We can estimate, however, that around 6 percent of students in our schools, or approximately 4.5 million children, will have identified gifts and talents (NCES, 2017).

Figure 1.3 represents the number of students who are served by the U.S. Department of Education, drawing on reports from the fifty states (Data Accountability Center, 2013). Remember that these are the numbers of children *receiving service*—not necessarily *all* of the children in each specific category. There are likely a number of students with disabilities who are undiagnosed. By far the largest category of exceptionality is that of students with learning disabilities who make up 3.6 percent of the total school population. About 1.6 percent of students are found in the Speech/Language category, while close to 0.6 percent of children are either identified as having an intellectual disorder (ID) or a behavioral and emotional disorder (EBD). The category that has changed the most over the years is ASD. The actual figure as of 2021 is more than 1 percent, an increase of three to four times that was assumed twenty years ago. This increase in students with ASD has received substantial media attention, and it will be discussed in greater detail in Chapter 5.

FatCamera/E+/Getty Images

A disability is not always easily observed by teachers or peers.

Figure 1.3 also provides estimates of prevalence of **low-incidence disabilities**. These are categories that make up less than 1 percent of the total school population. While there are fewer numbers of students with these exceptionalities, these students often have the most intense and complex needs. Students with multiple disabilities is the largest of these low-incidence categories at 0.19%. The reason for the small percentage (0.04%) for visual problems is that although many children wear glasses, this figure only includes children with "uncorrected" vision problems that can interfere with learning. The traumatic brain injury category makes up only about one-half of 0.1 percent of all children. Furthermore, while it is a serious condition, deaf-blindness in children is extremely rare (only one in ten thousand).

The prevalence numbers for ADD/ADHD have been included in the Other Health Impairment category in the statistical reporting here. The link between ADD/ADHD and learning disabilities and between ADD/ADHD and emotional and behavior disorders is well documented and this makes it difficult to provide definitive numbers for students with ADD/ADHD. Prevalence patterns within each category of disability also differ by student race, ethnicity, and socioeconomic status. Next, we will take a more nuanced look at the disproportionate demographic distribution of students with exceptionalities.

1-4 Significant Disproportionality Across Children with Exceptionalities

Significant disproportionality across racial, ethnic, and socio-economic populations continues to be one of the greatest challenges we face in appropriate identification of students with exceptionalities. This disproportionality is seen in the significant overrepresentation of students of color, with the exception of Asian

students, within special education as a whole (U.S. Department of Education, 2020). While there are different explications as to why disproportionality exists (Morgan et al., 2018; Morgan et al., 2019) the patterns of special education identification show that students of color (with the exception of Asian Students) are more likely to be identified for special education then White students. Three areas where we find disproportionality are (1) identification for special education, (2) educational placement once identified, and (3) disciplinary actions taken with students (National Center for Learning Disabilities, 2020). These three areas are intricately intertwined and show a disturbing pattern of the disparate impact educational policies and decisions can have for students of color.

1-4a Disproportionality in Identification for Special Education

Some researchers contend that racial disparity in identification of students for special education stem from the impact of poverty, which is often overlaid with race–claiming that it is the child's poverty, not factors involving their race, that is at the root of the problem. While poverty is arguably an adverse contributing factor in child development (we will discuss this in greater detail later in the chapter), we also have substantial evidence of systemic and individual biases that influence identification, or **eligibility**, decisions. Looking at patterns of students identified for special education, Grindal and colleagues (2019) showed that while both race and income play a role, income alone does *not* explain the overrepresentation of children of color. In the three states studied by Grindal (2019), Black students from non-low-income families were almost twice as likely to be identified with intellectual disabilities or emotional disturbances as their White non-low-income peers. These troubling findings should give us pause as we reflect on our important role as educators to support the success of each of our students.

Figure 1.4 shows the risk ratios or the likelihood of finding a child of a particular racial or ethnic background in special education programs as compared to the general population. Indigenous students are nearly twice as likely to be placed in special education as the general student population. Black students are 40 percent more likely to be identified with a disability when compared with all other students. Asian students, however, are 50 percent *less likely* to be identified for special education (National Center for Educational Statistics, 2020).

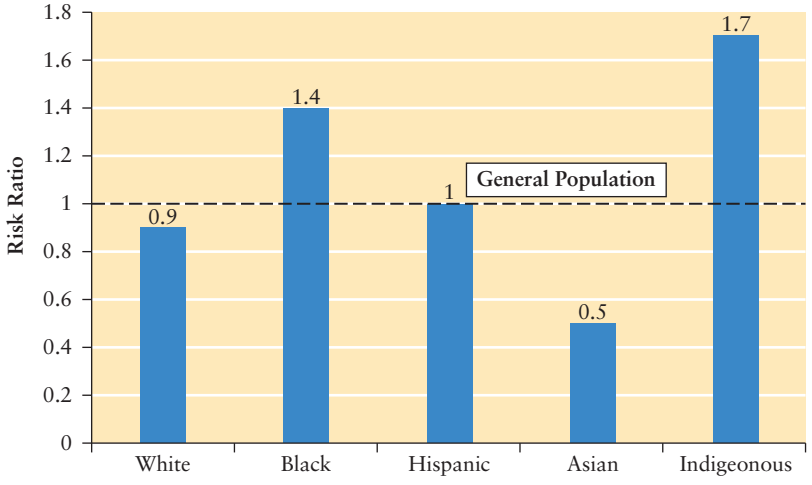

Figure 1.4 Risk Ratios for Students Ages 6–21 Served under IDEA within Racial/Ethnic Groups
Source: U.S. Department of Education. (2018). 40th Annual Report to Congress on the Implementation of the Individuals with Disabilities Education Act.

While Black, Latino, and Indigenous students are over represented in special education, as a whole, the problem is more complex than this. Travers and Krezmien (2018) examined the underidentifaction of minority students with Autism Spectrum Disorders (ASD). If minority students with autism are not being identified, this mean that they are not receiving the interventions needed to support their success (this will be discussed again in Chapter 5). The goal of special education identification is to appropriately match students' strengths and challenges with the supports and services they need to help them thrive. To meet this goal, we must accurately identify the students who need special educational supports.

1-4b Disparities in Special Education Placement

Once a student is formally identified with a disability, they become eligible for special education services. At this point a decision must be made as to how and where these services will be delivered and received. This decision is called **placement**, and legally, as we will see in Chapter 2, we must serve each student in what is called the **least restrictive environment (LRE)**. The LRE is premised on the belief that students with disabilities should be educated in a setting with their nondisabled peers to the greatest extent possible. Disparities exist in placements for special education services, and students of color are more likely to be taught in settings separate from their general education peers. While 68 percent of White students with disabilities spend more than 80 percent of their time in general education classrooms, only 60 percent of Black students and 63 percent of Hispanic students are with their general education peers more than 80 percent of the time (NCES, 2021).

1-4c Disparate Impact of Disciplinary Measures

The third area of concern with significant disproportionality is the disparity impact of disciplinary practices across racial and ethnic groups. Black, Hispanic, and Native students often receive harsher discipline than their White counterparts (NCLD, 2020). Harsher punishments include the greater use of restraints, both physical and mechanical, with students with disabilities (NCLD, 2020). Physical restraints involve the immobilization the students by direct contact with an adult. Mechanical restraints involve the use of any equipment or device that restricts the student's freedom of movement (this does not include devices used by trained school personnel and prescribed for the student, for example bands that help a child with cerebral palsy maintain a stable posture while seated). Mechanical restraints are used more frequently with Black students with disabilities then with students from other racial groups (NCLD, 2020).

These punishments also include higher rates of suspension and expulsion, removing students from the classroom and school settings. Figure 1.5 shows how a large percentage of Black and multi-racial students receiving IDEA services suffer out-of-school suspension, even though these students make up a much smaller proportion of the special education population.

These removals not only interrupt the student's access to educational supports sending them out where they may receive little or no supervision, they also give the student the message that we do not think they belong with us. This message likely undermines the student's connection with us and sabotages their motivation to continue their education. One likely outcome of this disparity in disciplinary practices is the higher drop-out rate for students of color—77 percent of White students with exceptionality graduated with a high school diploma in 2018, but only 66 percent of Black students and 71 percent of Hispanic students did (NCES, 2021). The impact that these disparities have on the lives of students is profound, and addressing them is the most critical challenge we are facing in special education today.

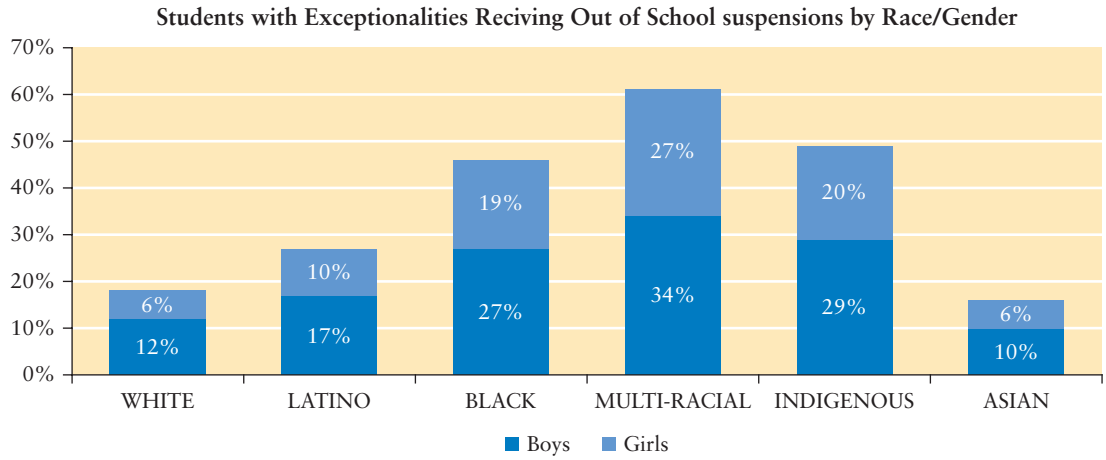

Figure 1.5 Students with Exceptionalities Reciving Out of School suspensions by Race/Gender
Source: National Education Association. (2007). *Truth in labeling: Disproportionality in special education*. Author.

1-4d Significant Disproportionality of Students with Gifts and Talents

The very same students who are overrepresented in special education, students from Black, Hispanic, Native, and/or low-income families, are significantly underrepresented within gifted education programs (Rinn, Mun, & Hodges, 2020) while Asian and White students are overrepresented proportionately within gifted education programs (Hodges et al., 2018). Because there is no federal law mandating services for students with gifts and talents, states are left to determine how they will identify and serve these students. This also means that states are not required to report how many students they identify as gifted or what the demographic make-up is for the students they serve as gifted and talented, making it difficult to know the extent of the problem with underrepresentation.

In a large study of identification practices, Hodge and colleagues (2018) identified the "risk ratio" for Black, Hispanic, and Native American students being identified for gifted education as 0.34—in other words, if you are a Black, Hispanic, or Native American student, you are about one-third as likely to be identified for gifted education as if you are a White or Asian student. Disproportionate underrepresentation within gifted education services is seen across all states (National Association for Gifted Children & Council of State Directors of Programs for the Gifted, 2018–2019). Figure 1.6 shows the disproportionality of gifted identification. If the representation were fair, then the percentage of students in gifted programs would closely match with the percentage in the population, but they don't. White students make up 50 percent of the general population but 58 percent of gifted classes, while Black students make up 15 percent of the population but only 10 percent are identified as gifted students. This pattern of underrepresentation within programs for students with gifts and talents is pervasive and pernicious, and the Board of Directors of the National Association for Gifted Children has acknowledged the role of structural and systemic racism as contributing factors to the inequities in identification of students with gifts and talents (NAGC, 2020).

While there are no quick fixes for the problem of significant disproportionalities in special and gifted education, one approach to the problem is to support the **cultural competence** of teachers. Cultural competence is the ability to relate effectively with people of different cultures and socio-economic backgrounds. Cultural competence includes awareness of one's own cultural perspective, attitudes toward cultural differences, knowledge of different cultural practices and

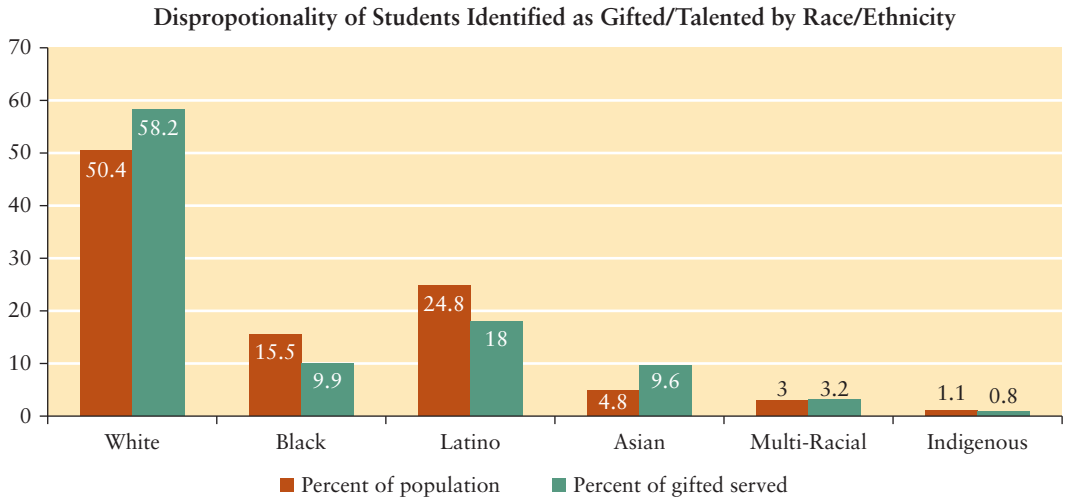

Figure 1.6 Dispropotionality of Students Identified as Gifted/Talented by Race/Ethnicity
Source: Department of Education, 2013–2014 State and National Estimations. Retrieved 2021 from https://ocrdata.ed.gov/estimations/2013-2014.

worldviews, and the development of cross-cultural skills. Developing cultural competence results in an ability to understand, communicate with, and effectively interact with people across cultures. As teachers become more culturally competent, the climate within the classroom and school shifts to better support all of the students with respect and caring. Dr. Cathy Kea shares her advice for developing a culturally competent teacher workforce (see Box 1.1).

Box 1.1 Ask the Experts: Fostering Family Engagement by Becoming a Culturally Competent Teacher


Dr. Cathy Kea

Dr. Cathy Kea, Professor of Special Education at North Carolina A&T State University

In today's world, it is critical that our teachers become culturally competent so that they can connect in meaningful ways with the diverse children and families they serve. Cultural competence is built on a foundation of knowledge and understanding, becoming comfortable with the unfamiliar, developing respect for the experiences of others, and being open to learning from them. In many ways, developing cultural competence requires the mindset of a researcher gathering information and looking for points of connection. And as with all research, the journey begins with genuine curiosity and lots of questions.

As teachers, our first step on our journey toward cultural competence is to learn more about the community of our students. What is the focus of the community? Where do families live, play, eat, gather? What resources are available in the community? Are there parks, libraries, hospitals? Creating a profile of your students' community will help you get to know and value their lives outside of school. Once we know our students' communities, we need to get to know their families. How do our students' parents feel about school? Do they readily accept invitations to participate in school activities, or

(Continued)