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Foreword

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Handbook on
Personalized
LEARNING

for
States, Districts, and Schools



Center on
Innovations
in **Learning**

edited by
Marilyn Murphy
Sam Redding
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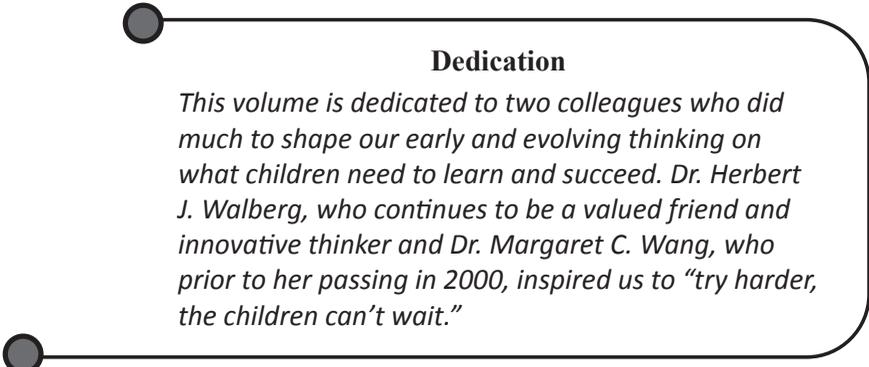


The Center on Innovations in Learning (CIL) is one of seven national content centers established by the U.S. Department of Education to work with regional comprehensive centers and state education agencies (SEAs) to build SEAs' capacity to stimulate, select, implement, and scale up innovations in learning. CIL focuses on two priorities: culture of innovation and personalized learning. Within the topic of culture of innovation, CIL examines change leadership, the science of innovation, and change processes: improvement, innovation, and transformation. Within the topic of personalized learning, CIL addresses several components, especially (a) learning technologies, (b) competency-based education, and (c) personal competencies.

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Dedication

This volume is dedicated to two colleagues who did much to shape our early and evolving thinking on what children need to learn and succeed. Dr. Herbert J. Walberg, who continues to be a valued friend and innovative thinker and Dr. Margaret C. Wang, who prior to her passing in 2000, inspired us to “try harder, the children can’t wait.”

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Foreword

Marilyn Murphy

*What the best and wisest parent wants for his child,
that must we want for all the children of the community.*

John Dewey, *The School and Society* (1907)

The *Handbook on Personalized Learning for States, Districts, and Schools* is presented by the Center on Innovations in Learning (CIL), one of seven national content centers funded by the U.S. Department of Education (ED). In 2014, CIL published the *Handbook on Innovations in Learning* that responded to a call by ED to “leverage the innovation and ingenuity this nation is known for to create programs and projects that every school can implement to succeed” (2010, p. v). With the recent advent of the Every Student Succeeds Act (ESSA; the new federal education law replacing No Child Left Behind) new opportunities are available for flexibility for states, districts, and schools in support of student learning. The “every” in ESSA presupposes an approach to learning that allows individual student growth for every student and for new ways for educators to implement a personalized learning approach that includes students advancing at their own pace toward rigorous benchmarks on a pathway to college, career, and citizenship; implementation of online and blended learning formats; and for rethinking and redesigning assessments to allow a personalized approach to assessing student growth rather than summative assessments.

The earlier volume focused on the harnessing of innovation to improve school success, and the authors presented chapters on defining innovation in the educational context and considered a number of best practices on emerging topics. Chapters in this new *Handbook* reflect the personalized learning goals of ESSA and reflect the view of personalized learning as a learning innovation.

There is no shortage of “personalized” in the current vernacular. The term “personal” is being widely applied to a variety of activities; there are personal trainers, personal shoppers, personal chefs, and myriad other ways that current culture and marketing encourage us to feel singled out for some particular category of attention that is supposedly

unavailable to others and specifically linked to our own “personal” profile. It sometimes seems that the term “personalized” has gone the way of the much-overused “special,” so often applied as to become meaningless.

Likewise in educational discourse, “personalized” is cropping up in a number of applications and discussions. As often happens, dialogue and vocabulary sometimes outpace clarification and understanding. In introducing the *Handbook on Personalized Learning for States, Districts, and Schools*, it is important to examine briefly what we mean by personalized learning and to offer a robust definition developed by CIL around this evolving topic.

A Little Background

Educational research has long supported the pivotal importance of the relationship of the teacher and the student to a successful learning cycle; this concept is generally recognized as the ideal model for effective learning. The teacher–student relationship is critical to any definition of personalized learning. In addition to recognizing the importance of developing and sustaining solid relationships, personalized learning varies the time, pace, and place of instruction. A number of learning strategies used in education over the years have contributed to these aspects of personalized learning, and the term has roots in several learning theories. Some precursors include Benjamin Bloom’s theory of mastery learning, promoted in the ’50s and ’60s as an instructional method that advances students from one topic of study to the next based on their mastery of the current topic. Using mastery learning, the student has some control over pace. Also in the ’60s, Fred Keller espoused a Personalized System of Instruction (PSI) that allowed each student to work on course modules independently. PSI is an individually paced, mastery-oriented teaching method which also incorporates behavior reinforcement theory. In the ’90s, Margaret Wang researched the “adaptive learning environments model” (ALEM), an educational approach that targeted instructional strategies to the needs of each student and was particularly responsive to diverse student populations in classrooms. Her ALEM was a component of Community for Learning, one of the first comprehensive school reform models validated by ED.

These early approaches to personalizing the teaching and learning experience were often referenced in their time as innovative and helped set the stage for a more complex theory of teaching and learning, a theory which is defined later in this foreword. Related work addressing student learning sometimes includes the term “deeper learning,” coined by the William and Flora Hewlett Foundation, to identify certain dimensions of learning. Those dimensions of student learning have some congruency with what this book refers to as personalized learning.

ED’s *National Educational Technology Plan* (2010) defined personalized learning as adjusting the pace of instruction (individualization), adjusting the instructional approach (differentiation), and connecting instruction to the learner’s interests and experiences (see p. 12). This definition clarifies that personalization is broader than individualization or differentiation, in that it affords the learner a degree of choice about what is learned, when it is learned, and how it is learned. ED views this concept as having broad implications for educational success. Richard Culatta, formerly the director of ED’s Office of Educational Technology, has noted, “Personalized learning may be the most important thing we can do to reimagine education in this country” (2013, para 3).

In the *Handbook on Personalized Learning for States, Districts, and Schools*, CIL provides a guide for the reader interested in clarifying and organizing the many aspects of this evolving topic. The chapters developed by the author experts provide a comprehensive insight into a number of subtopics of personalized learning. The chapter authors show there is room for overlap and divergence of opinion concerning personalized learning. However, the reader of this volume will walk away with an understanding of the topic that is both broad and deep. Each of the chapters includes a list of Action Principles for States, Districts, and Schools that will be a valuable resource for implementation and sustainability of the principles of personalized learning. The descriptive studies in Section V provide insight into how the principles can be applied in real-world situations and across subject disciplines.

A Definition of Personalized Learning

The portfolio of work within CIL is organized around three aspects of personalized learning: (a) learning technologies—the tools and the processes of teaching and learning; (b) competency-based education—defining and validating competencies in an environment not bounded by time, place, or pace; and (c) personal competencies—the propellants of all learning that are especially valuable in a personalized context. These three pillars provide an organizing framework for this complex topic. The following definition is used to organize the work of CIL and the contents of the *Handbook*:

Personalized learning refers to a teacher's relationships with students and their families; the use of multiple instructional modes to scaffold each student's learning; enhancing the student's motivation to learn as well as enhancing metacognitive, social, and emotional competencies to foster self-direction and achieve mastery of knowledge and skills. Personalization ensues from the relationships among teachers and learners and the teacher's orchestration, often in co-design with students, of multiple means for enhancing every aspect of each student's learning and development. Personalized learning varies the time, place, and pace of learning for each student, enlists the student in the creation of learning pathways, and utilizes technology to manage and document the learning process and access rich sources of information.

In choosing the contributors to this volume, the editors Marilyn Murphy, Sam Redding, and Janet Twyman considered how each author's expertise would map onto CIL's broad definition of personalized learning.

Section I: Personal Competencies as Propellants of Learning

This section of the *Handbook on Personalized Learning for States, Districts, and Schools* includes chapters on the topic of the personal competencies of students, their habits of learning, and the pitfalls and successes of measurement. In his opening chapter, *Competencies and Personalized Learning*, Sam Redding sets the stage for the rest of the volume with a thorough explication of what is meant by personalized learning and untangles some of the conflicting aspects of this complex theory. Joe Layng picks up the discussion with *Converging Qualities of Personal Competencies*, taking a critical look through the lens of skill hierarchies and examining some of what he sees as overlap and interdependency among the competencies. Allison Crean Davis urges us to *Proceed With Caution: Measuring That "Something Other" in Students*, and poses the question, How do we know that we are measuring what matters most for students? Before looking at the "how" and a table of some promising measures with certain features which have been

shown to be valid, Crean Davis takes us through a discussion of what we are measuring and some possible reasons to measure.

Section II: Students at the Center of Personalized Learning

Acknowledging that students are the central “person” in personalized learning, the authors in this section examine a variety of scenarios and processes that give students some control over their own learning, input that is elemental to personalized learning. Melinda S. Sota discusses one of the central concepts of personalized learning—learner choice. In *Co-designing Instruction With Students*, Sota not only provides a number of lists and suggestions to guide the reader through implementation of suggested strategies, but also considers how to maximize the positive effects of learner choice while minimizing the potential risks for students who may not be able to choose in their own best interests. In her second chapter, *Flipped Learning as a Path to Personalization*, Sota looks at two popular examples of teaching aided by technology—teaching practices that hold promise for improved instruction and personalizing education. Next, in the descriptive study *Empowering Students as Partners in Learning*, Kathleen Dempsey, Andrea D. Beeley, Tedra Fazendeiro Clark, and Anne Tweed describe the results and lessons learned from an IES-funded grant using formative assessment methods in math as part of the Assessment Work Sample Method (AWSM). They show that the infusion of assessment into the AWSM helped inform a shift in thinking from teaching as something teachers do to thinking of learning as something the learner does. In the final chapter in Section II, *Homeschooling: The Ultimate Personalized Environment*, William Jeynes notes that lessons have been gleaned from the current 1.77 million homeschooled students, a number that is expected to grow, and explores some of the particulars of this personalized environment that he suggests can be generalized to virtually any schooling situation.

Section III: Teaching and Technology in Support of Personalized Learning

Technology is viewed by some as the culprit in the growing depersonalization of our social world, untethering us from simple human interaction. But technology has a significant and thriving relationship to personalized learning and provides access both to managing and documenting the learning process and to accessing rich resources that might otherwise have been unattainable. In Section III, the authors explore a number of situations where teaching and technology provide significant support for a personalized learning environment. In her chapter, *Personalizing Curriculum: Curriculum Curation and Creation*, Karen L. Mahon presents what is meant by a personalized curriculum and how to be sure the curriculum one chooses is both appropriate and that the instruction is research based. Mahon identifies some best practices to follow and some to avoid in curating (selecting) a personalized curriculum. Well-constructed games encompass many of the elements of sound teaching and learning practice. In his chapter, *Choose Your Level: Using Games and Gamification to Create Personalized Instruction*, Karl M. Kapp looks at students’ use of games for learning and discusses how game-based learning enables each student to work at her own pace; the student chooses the level and works through it successfully before advancing to the next level, a scaffolding process that is intrinsic to personalized learning. Kapp poses the questions, What game elements lead to learning, and how does one make choices about the best use for a classroom? His chapter walks the reader through the decision process. In *Personalizing Learning Through Precision Measurement*, Janet S. Twyman advocates for “precision measurement aided by technology and integrated with a strong relationship between the student and a caring

teacher...instrumental in achieving the goals of personalized learning” (p. 147 in this volume). Twyman argues persuasively for a methodical approach to using measurement to sustain and advance personalized learning. Section III concludes with a discussion of learning analytics and large data sets, how they are used and how they might be more fully applied in education, including personalized learning. In *Using Learning Analytics in Personalized Learning*, Ryan Baker looks at some of the difficulties and the future potential for success with learning analytics in his exploration of this rapidly evolving and sometimes controversial field.

Section IV: The Personalized Learning Community—Teachers, Students, and Families

Much like the proverbial village it takes to raise a child, so too it takes a community of teachers, students, and families to embark on a successful personalized learning effort. In Section IV, chapters focus on relationships and community-building. *Preparing Educators to Engage Parents and Families*, by Erin McNamara Horvat, discusses what constitutes a valid connection between home and school and examines the institutional and social factors that have contributed to the current divide separating the two. Horvat argues that emerging teachers need to be self-aware and prepared to be supportive communicators and collaborators, building an environment of trust and reciprocity that truly values the assets of the home. In her chapter *Relationships in Personalized Learning: Teacher, Student, and Family*, Patricia A. Edwards looks backward—often from her own experience—to examine the history of segregation, and forward to consider inclusion as the key to creating and supporting a robust, personalized experience for all children. Edwards argues that a shared understanding of commonalities and differences among people can only help educators create a more educated (and literate) population. In their chapter entitled *Teacher–Student Relationships and Personalized Learning: Implications of Person and Contextual Variables*, Ronald D. Taylor and Azeb Gebre take a close look at students’ developmental needs and adjustments in creating a personalized learning environment. Their chapter argues that process variables, personal variables, context variables, and time variables must be considered in the construction of a valid personalized learning relationship and environment. The final chapter in Section IV looks at how preparation of teachers for a personalized learning classroom relationship can be more effective than the current professional learning model. In *Personalizing Professional Development for Teachers*, Catherine C. Schifter looks at professional development for teachers through the lens of personalized learning. Schifter introduces two adult-learning theories to support “the self-directed approach of personalized professional development” (p. 222 in this volume). She also provides an example of some important elements to include in preparing teachers to succeed as valued contributors to a personalized learning community.

Section V: Descriptive Studies of Specific Instructional Applications

This last section of the *Handbook* contains four chapters that apply the principles of personalized learning in various contexts. Because these chapters are descriptive studies, they do not contain Action Principles; however, they do offer valuable reflections on the experience of applying personalized learning to instruction. In *Using Universal Design for Learning to Personalize an Evidence-Based Practice for Students with Disabilities*, Sara Cothren Cook, Kavita Rao, and Brian G. Cook take lessons from special education, noting that much of personalized learning has roots in the education of special

populations. Cook and team discuss two specific contemporary educational initiatives—evidence-based practices and Universal Design for Learning—arguing that their application can help promote a personalized learning experience for students with disabilities. In her chapter, *Next-Generation Teachers in Linguistically Diverse Classrooms*, Tamara Sniad discusses how valuing all language can be used as a force to develop a personalized approach to teaching and learning in a linguistically diverse environment. Sniad provides a number of thoughtful strategies to support a community within a multiple-language environment. Frank J. Sullivan, Jr., looks at the literacy requirement of the Common Core State Standards and strategies for teaching in his chapter *On Personalized Learning in the Context of the Common Core Literacy Standards: A Sociocultural Perspective*. Sullivan argues that, although the Common Core standards prioritize literacy, the actual focus of those literacy standards is narrow. By focusing on “text-dependent reading” and “close reading” for facts, the experience of the student actively and thoughtfully engaging with the text suffers. Sullivan presents a framework that he uses to guide his own evolving teaching practice. The volume concludes with a descriptive study that includes suggested classroom activities and projects to personalize the learning experience. In *Social Studies and Personalized Learning: Emerging Promising Practices From the Field*, Christine Woysner contends that the “learning goals of social studies and the aims of personalization overlap significantly to support the learning and development of diverse students in becoming engaged citizens in a democracy” (p. 273 in this volume). Woysner supplements her discussion with classroom scenarios from her own teaching experience.

John Dewey argued that all students deserve an education suited for the students for whom we care most—our own children. Personalized learning has the potential to provide the optimal educational experience for every child. The intention of this *Handbook* is to advance the evolving scholarship on personalized learning and to provide a resource of strategies for those engaged in promoting and implementing personalized learning. Authors were not selected because there was necessarily agreement among them on all aspects of the topic; however, each chapter contributes to what this foreword and other sources have defined as CIL’s “robust” definition of personalized learning. We look forward to our readers continuing the discussion and seeing the rewards of personalized learning in classrooms, schools, districts, and states.

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