



PREFACE

AS A STUDENT at Hazel Valley Elementary School in Seattle in the mid 1950s, when I saw my first Patrol Boy, I was immediately enamored with the “uniform”—a white sash that shouted out that you had an important job to do, and the flag on a stick that gave you the authority to tell other kids when it was safe to cross the street. I decided early on that, when I reached sixth grade to qualify, I would immediately apply—this was the perfect job for me. When I was old enough, however, I was told that the position was only for boys, as clearly indicated by its title. I knew that *boy* was in the title, but I also knew I could do the job. I had been hanging out with my brother, male cousins, and the guys who worked at my dad’s used car business; it did not concern me that I would be the only girl in the group. I made a compelling case for inclusion on the Patrol Boy team, but my application was still rejected. *Boy* meant boy! And, besides, as the principal pointed out, girls were not “strong enough” for the position. But wait—had I missed something in the job description? I knew I was strong enough to carry the flag. To add insult to injury, my teacher was encouraging boys to apply to be Patrol Boys because not enough had done so that year. I left the experience disappointed but concluded that people in leadership positions make silly decisions. Since my girlfriends were uninterested, I was certain I was the only girl who wanted to be a Patrol Boy but have since learned that some girls broke through the glass ceiling before I was even born. In 1944, the Canadian Schoolboy Patrol Club, which launched in 1937, admitted Canadian girls to their ranks and changed their name to Safety Patrol.

End of story.

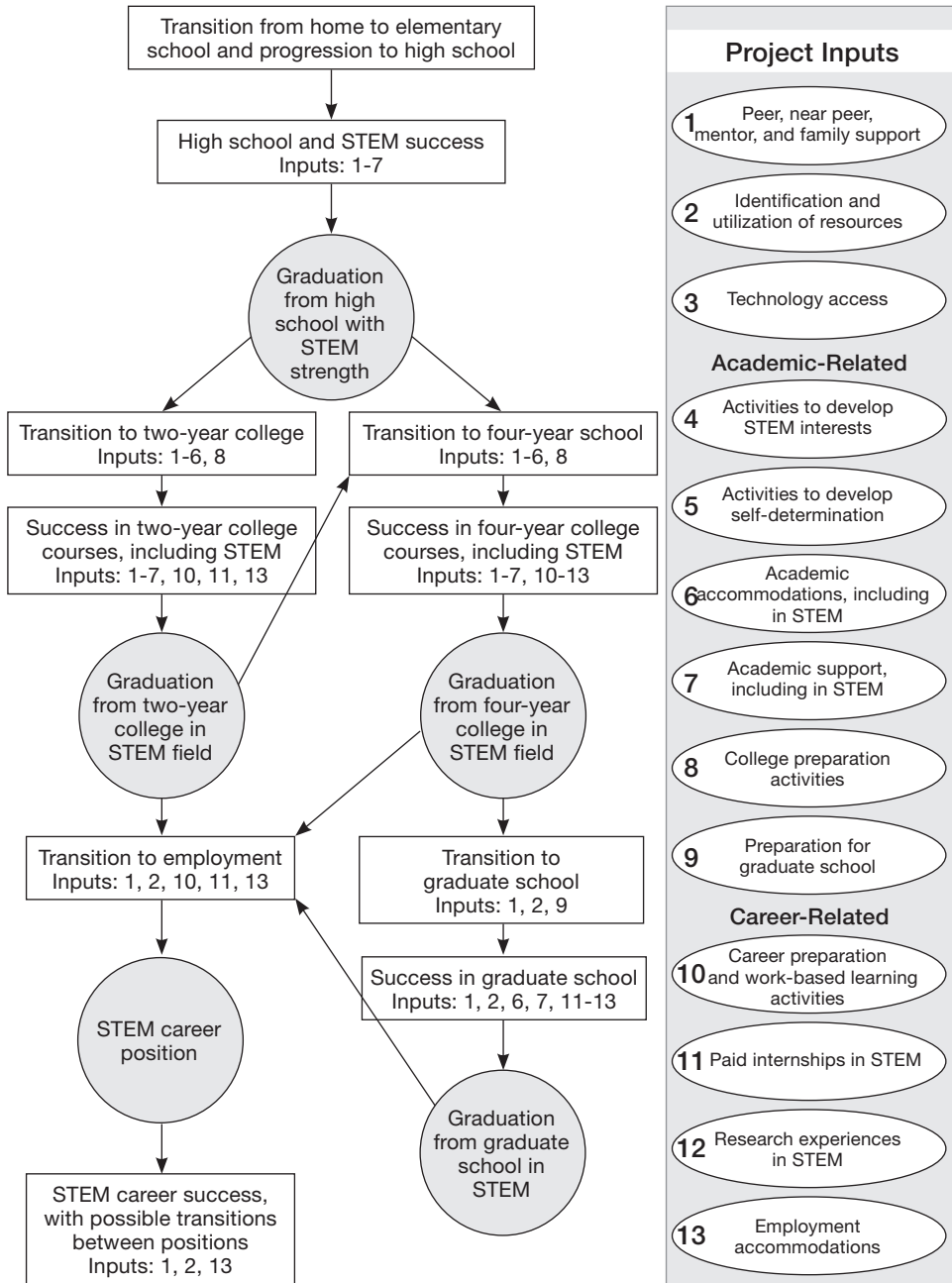
Not quite! But you'll have to wait until chapter 9, "What I Know for Sure," to learn how my dream of becoming a Patrol Boy was eventually realized due to the sensitivity of a young man who learned about my failed pursuit.

So what does the quest of a pushy young girl to become a Patrol Boy have to do with the topic of this book? Well, a commonly reported barrier that people with disabilities face in reaching success in college and careers is the negative attitudes of individuals in gatekeeper positions who label them unqualified without knowing much about them and with little interest in learning more. Some people who impose limits have good intentions or at least claim to. Their attitudes are particularly hard to change in part *because* they are associated with good intentions.

This book provides practical steps you can take to make postsecondary offerings more inclusive, particularly of people with disabilities, and thus contribute to a paradigm shift to a more inclusive campus. I start with a little background information about the experiences of students with disabilities in higher education and the efforts of the DO-IT Center, which I founded in 1992 and continue to lead as part of my responsibilities as the Director of Accessible Technology Services (ATS) at the University of Washington (UW). DO-IT stands for Disabilities, Opportunities, Internetworking, and Technology.

Although there is a significant gap between the accomplishments of students with and without disabilities, the success stories of some individuals with disabilities demonstrate that opportunities do exist for those who can successfully overcome barriers imposed by inaccessible facilities, technology, documents, textbooks and learning activities, student services, and other aspects of colleges and universities. That's what the DO-IT Center is all about. Our projects and programs have helped hundreds of high school and college students with all types of disabilities—including those that affect speech, sight, movement, social interactions, learning, health, and the ability to pay attention—gain access to transformative technology; develop self-determination, academic, and career skills; and learn to advocate for others. Based on a literature review and evaluation data from almost thirty years of practice, the critical junctures model illustrated in figure P.1 presents key steps toward the success of people with disabilities, particularly in science, technology, engineering, and mathematics (STEM) fields.¹ It highlights technology access, mentoring, peer support, and other interventions that are effective in supporting them on their life journeys. Participants continue in our programs to offer support to those who come after them. Project staff are fortunate to be among those who engage with participants as they find their way toward success in college, graduate school, and careers, as well as help others do the same.

FIGURE P.1 DO-IT's AccessSTEM inputs lead students with disabilities through critical junctures toward careers



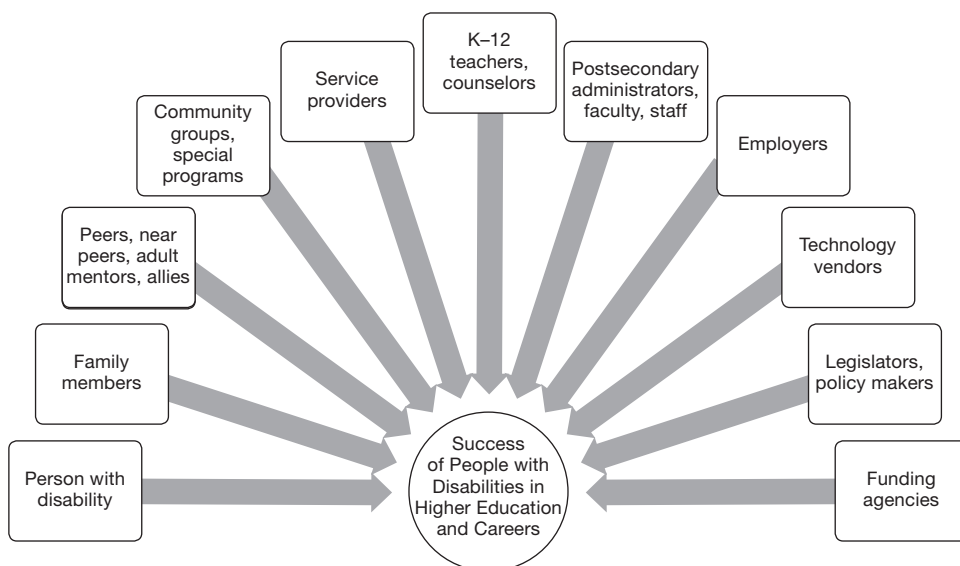
Now all we need to do is replicate programs like DO-IT, as we did with the launch of DO-IT Japan in 2007, for students with disabilities around the globe to develop the social, behavioral, technological, and academic competencies needed to realize their dreams.

Not so fast!

Preparing individuals with disabilities for success, undoubtedly important, addresses only one facet of the problem. Societal changes are also necessary to dismantle institutional inequities and level the playing field for this population, just as is the case for other underrepresented and underserved groups. Systemic changes like these require the involvement of many individuals and organizations. Figure P.2 identifies many of the stakeholders who can impede or promote the success of individuals with disabilities in higher education and careers. They include family members and allies; technology companies; employers; postsecondary administrators, faculty, and staff; legislators and policy makers; peers, near peers, and other individuals with disabilities; community leaders; service providers; K–12 teachers and counselors; and funding agencies. Who was it who said, “It takes a village”?

Institutions of higher education often profess goals to attract students with diverse backgrounds and provide all students with an equitable academic experience. Most relevant to the topic of this book, among their efforts to meet

FIGURE P.2 Stakeholders who can promote the success of people with disabilities



diversity and equity goals, postsecondary institutions can take steps to make physical spaces, technology, courses, and services accessible and otherwise welcoming to everyone, including people with disabilities. Universal design (UD) offers an overall approach for making necessary changes. Broadly speaking, UD challenges society to construct a world in which everyone can fully participate.

UD is consistent with social models of diversity and disability that, rather than looking first at characteristics of an individual, look first to those of products, environments, and social structures to identify and then remove barriers to full inclusion. UD encourages anyone designing a building, a course, a service, an event, a video, a website, or another product or environment to consider in the design process the diverse characteristics of potential users, including those with respect to race, ethnicity, culture, language, gender, sexual orientation, age, and ability. Proactive thinking at the design stage can reduce the need for disability-related accommodations and other adjustments required to include an individual after an inaccessible product or environment is created. In this book I share examples of how looking through a UD lens can lead to making curriculum and instruction better for everyone, physical spaces better for everyone, technology better for everyone, student services better for everyone, just about every design better for everyone. When those of us who teach include UD topics in our curriculum, we can also contribute to a world that is more inclusive of everyone through the future careers of our students.

Much of the content for this book emerged from projects associated with the DO-IT Center. With most funding coming from the US Department of Education and the National Science Foundation (NSF), DO-IT has led dozens of Universal Design in Higher Education (UDHE) initiatives to promote the application of UD to all aspects of postsecondary education. During its UDHE journey, DO-IT has engaged with hundreds of postsecondary institutions nationwide to develop and apply UDHE to the procurement, development, and use of technology, as well as to the design of physical spaces, student services, and learning materials and activities. Early efforts culminated in the formation of the Center for Universal Design in Education on the DO-IT website (uw.edu/doit), which continues to grow as new initiatives unfold. Among CUDE's many resources is the Knowledge Base. Search the Knowledge Base for questions and answers, case studies, and promising practices relevant to UDHE applications in education by selecting "Knowledge Base" and the "CUDE" Program/Area; then refine your search to locate content related to UDHE among the hundreds of articles included in the Knowledge Base.

The DO-IT website also hosts *AccessCollege*, a comprehensive collection of resources tailored to the needs and interests of specific stakeholders. Here, you will find the following “rooms”:

- *The Faculty Room*, for instructors and academic leaders
- *The Student Services Conference Room*, for student service administrators and support staff
- *The Board Room*, for college and university administrators
- *The Student Lounge*, for students with disabilities
- *The Veterans Center*, for student veterans and related service providers
- *The Employment Office*, for employers
- *The Science Lab*, for STEM teachers
- *The Center for Universal Design in Education*, for all educators

My passion for inclusion is grounded in personal, academic, and professional experiences. Many ideas coalesced in the late 1970s when I taught a child named Rodney how to use a desktop computer. Rodney, whose hands could not operate a keyboard, used a mouth stick to press the keys. In our journey, we had to discover how to modify the computer so that he could fully operate it with his mouth wand. As I engaged with Rodney, my view came to be that most of the obstacles he faced were not caused by his physical limitations, but rather the limitations of physical products and environments he encountered—the building entrance, the elevator, the floor plan, the computer, the candy machine, and the list goes on and on. Clearly, designers did not routinely expect someone like Rodney to use what they created. But why not? There have always been children with disabilities in the world. Sometimes society chooses not to see them. Sometimes well-meaning people try to protect them from a harsh world. Others write them off as uninterested or incapable of reaching goals typical of their peers who do not have disabilities.

I joined forces with others who asked simple questions like “Why can’t a person who is blind use this computer?” We rejected simple answers like “Because she is blind.” Instead, we asked, “Why can’t this oh-so-smart computer just speak to her?” Over time, the work in ATS, including the DO-IT Center, has increasingly addressed the proactive design of accessible mainstream technologies to minimize the need for, but be compatible with, specialized technologies for individuals with disabilities. It became clear to us that campuses worldwide have erected many other obstacles for people with disabilities that could have been easily avoided through the adoption of inclusive practices

throughout all phases of the design process. A UD approach holds promise for moving forward the agenda of advocates for a more inclusive world.

ABOUT THIS BOOK

This book documents applications of UDHE that impact teaching and learning on-site and online. Although differences in UD terminology are presented in the literature, “the goal is profound: we can and should make our human-made world as accessible and usable as possible for as diverse a user population as possible.”² To control its length, although UDHE is applied worldwide and benefits many people, most examples presented in the book are in the United States and focus on students with disabilities. I share UDHE perspectives and practices gathered throughout my travels, but many specific examples are from my campus, not because they are necessarily best practices, but rather because I know their evolution, challenges we encountered in implementation, and lessons we learned.

This book complements *Universal Design in Higher Education: From Principles to Practice*, for which I am editor and lead author.³ In that book, more than forty authors and coauthors who are leaders in the field present a comprehensive exploration of research and practice relevant to UDHE. It is appropriate for academic courses in higher education, student services, and diversity studies, and I use it as a text in online courses I teach in disability studies and disability services programs. In this book, I often refer to this earlier work for a deeper dive into the content being discussed and a more comprehensive list of references.

The first book is not a prerequisite for understanding this one. The current publication should be particularly useful for those readers who are ready to undertake actions for making their institution or a specific aspect of it more inclusive. It is particularly well suited for

- disability service providers who want to learn how to move from accommodation-focused services for students with disabilities to an approach that also promotes inclusive practices campuswide to minimize the need for accommodations;
- managers of information technology (IT), facilities, and student services who want to be more proactive in making their on-site and online offerings beneficial to everyone;

- academic instructors and instructional designers who wish to combine UD with evidence-based on-site and online teaching practices to better meet the needs of an increasingly diverse student body;
- professional development trainers who wish to include inclusive practices in their training and make on-site and online training sessions accessible to all learners;
- individuals who are looking for tips to get started in implementing UD in their area of practice; and
- diversity leaders looking for a potential framework to underpin an implementation model that can be tailored to address diversity issues on any campus.

In this book I present a UDHE framework as one that can be fleshed out into a toolkit for the design of physical spaces, technology, teaching, and services that is compatible with any other approaches an institution embraces for becoming more inclusive. I also briefly cover the development and measurement of campus culture, medical diagnoses related to specific impairments and disabilities, reasonable accommodations, commercially available assistive technology, accessible technology design, and legal issues and in each chapter point to more resources to learn more. Following are titles of the nine chapters of this book:

- Chapter 1: Diversity, Disability, and Civil Rights
- Chapter 2: A Framework for Inclusive Practices
- Chapter 3: Physical Spaces
- Chapter 4: Technology
- Chapter 5: Teaching and Learning Activities
- Chapter 6: Teaching and Learning Services
- Chapter 7: Teaching About UD
- Chapter 8: A Model for an Inclusive Campus
- Chapter 9: What I Know for Sure

UD strategies are presented throughout but were also used to create this book. For example, it is available from the publisher in an accessible electronic format for people who face challenges to reading printed materials. This book includes UD features that make it more readable for everyone, including those with disabilities related to sight or learning. Each chapter begins with an abstract summarizing its content followed by an introduction that includes specific learning objectives so you know where you are headed. Chapters are ordered so that new content builds on previous chapters, but all chapters point to earlier

foundational material and thus can be read out of the order in which they are presented. I define acronyms when first used in each chapter—so be prepared to see UDHE spelled out nine times! I also make generous use of bulleted lists to make content easy to digest in small chunks. “My Go-To Resources” sections at the end of each chapter list good launch points for further exploration.

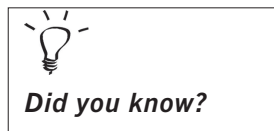
Throughout the book you will find content with a shaded background under “TAKE ACTION!” section headings with this image:



Each Take Action! item is labeled as a (LEARN), (REFLECT), or (APPLY) exercise according to its purpose for you to

- REFLECT on how the content in the chapter is relevant to you,
- LEARN about UDHE topics by yourself or within academic and professional development courses or communities of practice, or
- APPLY UDHE to practices in a specific area or institutionwide.

Another feature of the book is periodic sidebars with optional reading labeled as follows:



If you want to absorb the content of this book without considering specific actions or reading optional text, simply skip all of the shaded Take Action! items and “Did you know?” sidebars. To locate specific content, consult the table of contents, the index, or table P.I to discover where answers to specific questions can be found.

Throughout the book you will find many ways you can personally engage in a UDHE initiative. In addition, through the DO-IT Center, you can

- join our UDHE online community of practice (CoP) of individuals interested in sharing UDHE practices and resources; send your request to doit@uw.edu;
- propose questions and answers, case studies, and promising practices to add to DO-IT’s Knowledge Base; send a draft to doit@uw.edu; and
- submit articles to an online book in the CUDE, *Universal Design in Higher Education: Promising Practices*, by following the author guidelines in its preface.

TABLE P.1 Questions answered in this book

<i>If this is your question</i>	<i>Find your answer in chapter:</i>
What are types of disabilities?	1
What challenges do postsecondary students with disabilities face?	1
What are rights and responsibilities of students with disabilities and institutions regarding access issues?	1
What is the history of UD?	2
How does UD compare with other proactive approaches to design?	2
How are UD, UDHE, UDL, and UDI defined?	2
To what institutional offerings can UDHE be applied?	2
What is a framework for applying UDHE?	2
What are the principles of UDHE and a process for applying it?	2
What would a paradigm shift toward a more inclusive campus look like?	2
Who are beneficiaries of UDHE?	2
What are UDHE principles and guidelines for physical spaces?	2, 3
What is the difference between a space being “ADA compliant” and universally designed?	3
What are UDHE principles and guidelines for IT?	2, 4
What is the difference between assistive technology and accessible technology design?	4
What are key points in the civil rights rulings regarding the inaccessible design of IT?	4
What are UDHE principles and guidelines for teaching and learning activities—the Universal Design of Instruction (UDI)?	2, 5
How does UDI relate to teaching and learning theories and research?	5
How can I apply UDI when I teach online ?	5
How can I apply UDI to an entire academic department or program?	5
What do students with disabilities have to say about UDI?	5
What are UDHE principles and guidelines for campus services offered on-site and online?	2, 6
What types of services can be enhanced by applying principles of UDHE?	6
Why teach about disabilities, accessibility, and UD in courses?	7
How can I integrate disabilities, accessibility, and UD concepts into my courses?	7
What might a model for an inclusive campus look like?	8
How can a model for an inclusive campus be applied to IT?	8
What are roles stakeholders can play in promoting UDHE?	8
What are promoters and inhibitors of change to a UDHE paradigm?	8
How does Oprah Winfrey fit in?	9

CONCLUSION

I have always considered UD to be an old idea with a new name, an ideal more than a fully achievable result, a process more than a set of prescriptive practices, and a journey more than a destination. I look forward to sharing the journey with readers of this book as I have with collaborators in DO-IT's UDHE initiatives. Many thanks to those who have contributed to my ever-growing understanding of how looking at all offerings through a UDHE lens can contribute to making a campus more inclusive. A special thanks also goes to the DO-IT Center for creating line drawings presented in this book; you can use them in your publications or on your websites as well; check out our collection at uw.edu/doit/line-drawings-and-images.

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