WHAT YOUR COLLEAGUES ARE SAYING . . .

We know that every student is advancing their learning at a different speed. This book makes a great case for goal setting as a critical way to realize student potential. Chase Nordengren offers research-backed evidence along with valuable advice for all educators about the power of goal setting to advance learning, motivate students, and establish long-term knowledge that will help students succeed.

—Chris Minnich
Chief Executive Officer, NWEA

When students know the goals of learning, they are more receptive to teaching, feedback, and assessment and are more likely to engage and enjoy the hard work of learning. This is the go-to book to learn more about effective and efficient goal setting and how to involve the students in setting and evaluating progress to mastery and deeper learning goals. The book also recognizes that every student already has their goals; educators can learn how to work with these to entice them to also aim for their goals (and not the other way around).

—John Hattie
Author, *Visible Learning* series

As we find ourselves immersed in resetting and reimagining schools for student-directed learning, Chase Nordengren provides us with current research on student motivation while offering educators practical strategies for student goal setting. Through *Step Into Student Goal Setting*, practitioners are offered a well-grounded why for this practice along with essentials for measuring learning, supporting autonomy, developing a classroom culture of academic press, and one-on-one conversations, all of which empower learners as well as teachers on this journey. This is a tool that can be used by administrators with staff to shift the paradigm, by classroom teachers to reflect and rethink their positions on student-directed learning, and by schools to open the door to grounding themselves in how humans learn. Let's get started!

—Anna Sugarman
Professional Learning Coordinator, Shenendehowa Central Schools

Chase Nordengren's book carefully balances a grounding in research related to goal setting (with gentle reminders not to rely on a single study) with practical suggestions for how to turn that research into classroom practice. To support students in increasing their use of goal-setting practices and moving toward greater autonomy of learning, teachers may need to engage with similar strategies; to that end, Chase also provides opportunities for teachers to reflect, plan, and act on the recommendations within each chapter. This book provides a wealth of tools for teacher learning communities to engage with over an extended period of time to address an important teaching practice that will support student learning.

—Caroline Wylie
Principal Research Scientist, ETS

In his book, Chase Nordengren reminds us about the power of intentionality and how we can use goal-setting to empower our students to become agents in their own learning. With a combination of practical application and thoughtful approaches, he helps recast goal setting from an often-used strategy to a pedagogy that ensures the centering of our students. It's a perfect read for anyone who is ready to reignite purposeful learning.

—Sarah Brown Wessling
2010 National Teacher of the Year

What if the best parts of our assessment and teaching practices were focused on the humans they are intended to most impact? In other words, what if our assessment practices were student-centered by design? What if we could live these values in our classrooms, learn through empathy so we can understand the lived experience of each and every student, begin the learning journey by centering students as active partners, co-create aspirational outcomes, and liberate students to build their own pathways to achieve their visions? *Step Into Student Goal Setting* is an opportunity to do just that. Nordengren's book offers tangible steps that all educators and students can take as they unlearn disempowering educational habits and roles, opting instead for a student-powered system that elevates student involvement and shared decision making to give students a stake in their own future.

—Erin Whitlock
Professional Practice Consultant with the
Center for Great Public Schools at the Oregon Education Association

STEP INTO STUDENT GOAL SETTING

STEP INTO STUDENT GOAL SETTING

A Path to Growth, Motivation, and Agency

Chase Nordengren

CONTENTS

PREFACE

We're at a moment of extraordinary reckoning in education.

In 2020 and 2021, a generational pandemic stressed nearly every aspect of our school systems, keeping students separated from the peers and resources that had supported their learning and forcing teachers to recreate the classroom in a foreign virtual environment. This period has required us to examine the cobwebbed corners of instructional practice and try to understand what about teaching and learning was essential, what could be skipped, and what was long overdue for a change. The pandemic has been hard on all students whose schools were closed but has been particularly hard on those with limited access to technology, home environments less conducive to studying, or the hardships and traumas of economic recession and personal illness. Crises often work as a magnifying glass: They enlarge the wicked problems that have always impacted students and bring into focus the challenges that have always confronted educators.

Even as this particular challenge continues, the questions it has raised point to areas where schooling in general needs to evolve. What does it mean to be in fifth grade, if every student experienced fourth grade differently? Are the grading systems that many thought were unfair and unreasonable during a pandemic fair and reasonable the rest of the time? How can the relationships among teachers, students, and learning change so that students can keep growing even if they are taught from a distance for weeks, months, or a year at a time? The next major disruption to learning—whether it comes in the form of a pandemic, a severe environmental event, economic migration, or something else we can't imagine yet—requires us to have better answers to those questions.

This book considers how goal setting for students contributes to those answers. By themselves, goals offer students the opportunity to take ownership over their learning, relate what they're studying to their long-term ambitions, and experience success regardless of how below or above grade level their current knowledge sits. What I hope you'll see in this book is the larger tapestry of effective teaching and

learning practice that setting goals engages: from formative assessment practice to metacognition to social-emotional learning. These practices form the bedrock of an updated educational system prepared to deal with challenges like the pandemic, the increasing rate at which students transition between different schools and different school districts, and the difficult emotional pressures of growing up in the 21st century.

There are no silver bullets in education, no magic set of instructional or leadership techniques that produces above-average growth for all students at all times and under all circumstances. Setting goals isn't a silver bullet, either. What goal-setting practice provides is a framework linking practices of effective educators in ways that help better engage students with high-quality instruction. That framework is not an instant solution: It requires making choices about how to best use these practices, all meant to be made by the educators who know what students need best. Rather than dictating one path forward, this book hopes to highlight those choices and lead you through the process of making them.

ACKNOWLEDGMENTS

This book features the insights of nine current and former classroom teachers: Lindsay Deacon, Cara Holt, Eric Johnson, Matthew Marchoyok, Ryan McDermott, Caryn Miller, Alyssa Nestler, Courtney Pawol, and Erin Whitlock. My deepest thanks to them for the invaluable window they've opened into their practice. My colleagues at NWEA who supported this project are too many to name them all, but they include Erin Beard, Jennifer Morgan, Emily Vislocky, Vicki McCoy, and Jacob Bruno. Tori Bachman at Corwin and this book's peer reviewers provided essential feedback and support in bringing this project to fruition.

Along with magnifying wicked problems, periods such as these also highlight the strength, peace, and persistence we draw from those most important to us. That person for me is my wife, Hope, whose support and encouragement guided this book to its completion.

PUBLISHER'S ACKNOWLEDGMENTS

ABOUT THE AUTHOR

Chase Nordengren, PhD, is a Senior Research Scientist at NWEA, where he supports the professional learning team with primary and secondary research that drives content innovation and instructional improvement. His work includes needs assessment and program evaluation services for partners, supporting school improvement processes, and thought leadership on formative assessment and student goal-setting practices. He received a PhD in Leadership, Policy, and Organizations in K-12 Systems from the University of Washington as a US Department of Education Institute of Educational Sciences (IES) predoctoral fellow.

INTRODUCTION

Two Revolutions in Learning

In our relentless drive toward improving learning for students, it's easy to forget just how far schools have come in the last few decades. Someone who hasn't been part of these changes would likely be surprised when walking into an average school. The neat rows of desks that screamed "classroom" thirty years ago aren't nearly as ubiquitous as they used to be. In schools with means, a single computer lab has been replaced by mobile devices or even a laptop assigned to each student. Students are exposed to a much wider literature canon and asked to wrestle with deep problems at earlier ages.

Despite all that progress, we know that there's still much to do in order to bring these types of innovations to every school that needs them. Few schools have the resources, the flexibility, or the expertise to apply every educational best practice with perfect fidelity. After conducting all the research and understanding what it means comes the often much more difficult task of understanding how to bring effective practices to all kinds of schools and adapt them to meet individual student needs. But the progress in education to date serves as an ideal point of reflection on how our ideas about students—and our systems for educating them—have changed.

Unlike past generations, we encourage our children to be both seen and heard. We ask teachers to mold them into active, critical, and happy individuals instead of simply compliant members of our community. Our students have their own heroes, their own dreams, and their own senses of right and wrong—and they're not afraid to tell us when their sense conflicts with ours.

Goal setting—the subject of this book—is about taking the spirit in which we educate and translating it into concrete instructional moves that can motivate students to learn more, express more confidence in themselves and their learning, and achieve their short- and long-term aspirations. It is first and foremost a creative and individualized practice, focusing on meeting our individual students where they are and

> *Goal setting is about taking the spirit in which we educate and translating it into concrete instructional moves that can motivate students.*

providing for their needs in the moment. And it serves as a link to some of the most important and innovative tools of effective instruction: formative assessment, student ownership, and social-emotional learning.

Both the history of educational progress and the research that has accompanied that history demonstrate why goal setting works in classrooms with all types of students. In the brief wander through that history that follows, what sticks out most are the ties researchers consistently find between students' academic learning and their social-emotional well-being. When schools serve students as people—and not as interchangeable widgets—they are both providing for students' emotional needs and delivering more effective instruction.

THE FIRST LEARNING REVOLUTION

In 2000, the National Research Council (part of the National Academies of Sciences) released the groundbreaking book, *How People Learn*. Developed and written over the course of two years by a committee including many of the leading lights in learning theory, child development, and psychology, the book captured rapid developments in how we understand thinking and learning. The proliferation of magnetic resonance imaging (MRI) technology in the 1980s and 1990s created never-before-seen pictures of brains at work. Neuroscience, in turn, began understanding how the brain is organized and how it functions— and how learning shapes it over time. Social science shifted as well; computer-assisted testing and automated scoring were used to compile large data sets about what students know and how they learned it. In the Council's words, these developments took learning "from speculation to science" (National Research Council, 2000, p. 3).

When added up, these developments and many others advanced a fundamentally new idea of how learning happens—from memorizing and repeating facts to building "the intellectual tools and learning strategies" that allow people to find and use information in their world (National Research Council, 2000, p. 5). To the 19th-century teacher in a one-room schoolhouse (and even to many 20th-century teachers), this constructivist approach to knowledge would be almost inconceivable: too hands-off, too varied, too chaotic. In the 21st century, it is an appropriate response not only to the increasing power of new research tools and techniques but also to a world that is constantly changing and evolving.

As our approach to learning changes, so do the goals of schooling. Gone (at least in theory) is the 19th- and 20th-century emphasis on efficiently cramming students' heads full of essential sets of facts and figures. In its place, schools are now asked to enable learners to identify problems, build solutions, and display the "adaptive expertise" required for new types of work and social engagement. To navigate this complex learning environment, school systems rely on standards: using learning statements to understand what students are expected to know and assessment to measure progress toward proficiency.

How People Learn updated several outmoded conceptions of how students learn. However, the reality portrayed in the report departs from ours in the relatively little attention it gives the cultures, contexts, and needs of individual learners. The most prominent learning studies highlighted in *How People Learn* were conducted in sterile labs rather than in classrooms, diminishing the importance of individual student differences. It would take another revolution to build a more complete conception of how learning works.

THE SECOND LEARNING REVOLUTION

In 2018, the National Academies of Sciences once again captured the contemporary landscape of learning science in *How People Learn II*. Working from the consensus of a similarly elite group of scholars, the second volume addresses remarkable developments in research examining learners, contexts, and cultures. Introducing new research methods and disciplines, this new text paints an updated picture of learning and of learners. "Learners function within complex developmental, cognitive, physical, social and cultural systems" that shape not only what people learn but also how they learn (National Academies of Sciences, Engineering, and Medicine, 2018, pp. 21–23). These systems impact learning at every stage, the authors write, and even change the biological development of the brain. "Culture fundamentally shapes all aspects of learning, from the wiring of the brain to the way that communities and societies organize learning activities" (p. 135).

How People Learn II merges a focus on the process of metacognition and executive function with a deeper understanding of the social systems in which learning takes place. "Motivation to learn is influenced by the multiple goals that individuals construct for themselves as a result of their life and school experiences and the sociocultural context in which learning takes place" (National Academies of Sciences, Engineering, and Medicine, 2018, p. 133). This context

includes factors as diverse as a person's social identity, cross-cultural differences in perceptions of the self, safety and well-being in the home, and stereotype threat (the influence of prejudice and bias on a student's self-efficacy and self-esteem). Well-set personal goals, the definition suggests, are a student's pathway out of the adversity created by some of these factors.

Goals are an essential and recurring element of this new way of thinking. But *How People Learn II* approaches goals in a different way: Learning goals are individual, contextual, and constantly changing. Goals "are important for learning because they guide decisions about whether to expand effort and how to direct attention, foster planning, influence responses to failure, and promote other behaviors important to learning" (National Academies of Sciences, Engineering, and Medicine, 2018, p. 117). Goals are focused on what is meaningful and relevant to learners as they progress. The task of educators is to align teaching and learning to help students meet their goals.

> *Goals represent the path of learning from beginner to expert. But students don't all take a single path and aren't even all headed toward the same destination.*

What made goals suddenly so essential to learning? The answer lies in how these two revolutions come together. By 2000, research had conclusively demonstrated that students were individuals: Instructional strategies had to appeal to each student's unique needs and course of development to prepare the student for a world where critical thinking and adaptability had become central. By 2018, new research had enhanced that conclusion by illuminating the social forces, motivations, and contexts that make each student so different.

Goals represent the path of learning from beginner to expert. To embark on that journey, students must understand where they are going and how they will get there. Research shows that students don't all take a single path and aren't even all headed toward the same destination. Therefore, the process of charting their individual paths—goal setting—is a critical first step in the learning process for every student.

THE IMPACTS OF GOALS

Among effective instructional practices documented by researchers, goal setting is hiding in plain sight. While relatively few researchers have attempted to make a direct connection between goal-setting practices and improvements in students' standardized test scores,

research literature is full of connections between achievement and key cultural factors affected by goal setting: student motivation, ownership of learning, and building an academic culture.

Education researcher John Hattie has been tracking the strongest influences on learning outcomes through his Visible Learning® framework since 2008. Hattie uses meta-analysis, a research tool that averages together impacts from several studies to find the overall effect of a type of intervention. These meta-analyses each focus on specific instructional and leadership strategies and the effect they have on student progress. Strategies that yield learning gains above the average effect size of 0.4 are identified as the most important opportunities for educators to impact student learning and improve schooling.

Hattie's (2021) review shows that setting appropriately challenging goals with clear goal intentions and high student commitment has positive and important impacts on student outcomes. Reviewing many of the other teaching strategies on Hattie's list shows why. Effective educators engage students in metacognition, through processes described as *cognitive task analysis, reflection, elaboration and organization*, and *evaluation and reflection*. They inspire students to try their hardest to learn (*effort, mastery learning*). And they provide regular feedback on what students are learning (*feedback, setting standards for self-judgment, providing formative evaluation*). Effective goal-setting techniques focus on providing students with all these benefits.

Among studies that do specifically examine goals and goal setting, Marzano (2009) finds an effect size between 0.42 and 1.37, representing a difference of between 18 and 41 percentile points for an individual student. Explanations for this impact come from how the studied programs influence metacognition, effort, and feedback cycles. Goal setting serves to cultivate student interest in learning and alter students' perceptions of their own abilities (Usher & Kober, 2012). Second, goal setting focuses students on specific outcomes and clarifies the relationship between those outcomes and success in the future (Stronge & Grant, 2014). Finally, goal setting contributes to an academic culture, explaining a significant portion of student achievement (Leithwood & Sun, 2018).

Changing a culture can feel abstract and impossible, but it doesn't have to. What we refer to as "school culture" comes down to what students think about learning: how learning works, what qualities good learners possess, and whether learning is worth their time and effort. Goal setting has the power to shape those attitudes for students and, in turn, shape the school culture around them.

The kinds of research captured by meta-analyses like Hattie's have a precision closer to an ax than a scalpel. It can't tell you precisely what to do in your classroom with your students: After all, the contexts and cultures of those learners play a big part in what works and what doesn't for them. What this research does do is direct our attention: It helps us identify which instructional practices can help us have the greatest impact on students and their learning, as long as those practices are done effectively and with consistent attention to individual learning needs.

THIS BOOK

This book is that scalpel, your guide to identifying an approach to helping your students set goals that works the best for them and for you. What's described here is not a program: There are no regimented schedules or scripts you must read word-for-word. For reasons that will hopefully become apparent, this is not a prescribed series of steps that must be followed in a certain way. Instead, this book offers a set of general principles that make goal setting successful and numerous examples from research and practice to support your own journey toward a goal-setting practice that's all your own.

The book's discussion is built on two pillars: evidence from published research and real-life examples from educators. The research featured here comes from a variety of focus areas in education—social-emotional learning, formative assessment, student ownership of learning, and student engagement—in which goal setting has emerged as a common topic of study and a source of immediate impact for students. The educators featured here represent a variety of grade levels and subject areas, all using their own version of a goal-setting practice to keep students motivated, interested, and working toward growth and deep learning. Throughout the book, I'll guide you through practical reflections and applications to jump-start your thinking and connect the general principles to your specific needs. I hope you'll treat both the research evidence and accounts of individual practice as relevant and important sources of information and inspiration to think about a goal-setting practice that fits the climate, culture, and context of your students and amplifies your own strengths as an educator.

We'll begin by exploring in depth the research on what makes a goal meaningful, attainable, and relevant for students. "Chapter 1: What Good Goals Look Like" focuses on three universal principles for all effective goals: that they are individual, that they focus students on

mastery instead of performance, and that they are both meaningful and attainable. It connects the dots between the instructional power moves that goal setting enables to illustrate why the practice can be so powerful when implemented well.

The chapters that follow lay out five key principles around which to develop your goal-setting practice. "Chapter 2: Start Early and Keep It Up" focuses on how goals look with students in different grade levels and how they adjust with a student's cognitive development. Goal setting can start very early in a student's educational career—as early as the first week of kindergarten. The chapter examines how early practice with developmentally appropriate goals gives students the experience they need to excel at goal setting in later grades.

"Chapter 3: Build the Habit" explores how to make goal setting a routine part of your classroom practice, including tracking progress and updating goals over time. The central element of any good goal-setting practice is one-on-one conversations with students, reviewing what they know and setting the path for what they're ready to learn next. The chapter describes the necessary elements of those conversations and provides several example protocols to use with students to help them think through their goals.

"Chapter 4: Showcase Success Through Balanced Assessment" builds on goal-setting conversations, showing how educators can amplify the impact of goals by providing students with ample opportunities to witness their own growth and that of their peers. The chapter looks at the role of frequent formative assessment in enriching goal conversations with concrete opportunities for students to demonstrate their learning. It also explores the use of personal best goals as an alternative motivator to keep students focused on mastery.

"Chapter 5: Create Personal Relevance" centers relevance as an essential aspect of goals that students truly own. The chapter considers how teachers can connect goals to students' interests, aspirations, and motivators. It explores a set of practices for focusing on students' long-term learning intentions that can help provide underlying relevance to a host of classroom activities.

"Chapter 6: Use Student Choice to Support Autonomy" describes how setting and meeting goals can empower students and deepen their learning. The chapter summarizes extensive research on the connection between student goals and student ownership of learning. It also describes in depth how to balance student autonomy with directive

coaching appropriate to each student's current level of independence, ensuring that goals are both meaningful and realistic.

The book concludes with a clear call to action for you to build a goal-setting practice, based on this evidence, that adapts to the unique contexts and needs of your classroom.

A NEW KIND OF TEACHING

If you're like most teachers, you received little formal training in how to use data to plan learning with students (Jimerson, 2016). Chances are good that you picked up this book to meet one of your own goals: You want to drive growth for your students, close achievement gaps, or make time and space in your classroom for student voice and choice. These goals are important to consider in building your strategy; they're also a great way of connecting with your students. Seeing teachers set and meet their own goals—whether professional or personal—shows that this process isn't busy work but instead is part and parcel of building a successful life. From the first week of kindergarten, students can begin immersing themselves in a culture where everyone sets goals, monitors their progress, and celebrates their success.

It's my hope that you also see in this book a different way of thinking about teaching. The "sage on the stage" notion that characterized teacher training for much of the 20th century not only runs counter to the best interests of students, but it is also hopelessly impractical. Anyone who has been in a classroom in the last decade knows the diversity of learning strengths and needs represented there. While these needs have, as of this writing, been exacerbated by interrupted learning caused by the COVID-19 pandemic, they were always there.

This book considers teaching not as delivering from a stage but as directing learning. As the learning director, your job is to connect your students with the content, techniques, and motivation they need to be successful learners. While that task is formidable, the rewards are immense: helping mold individual students using the materials and activities that are best for them. Goal setting is the glue that binds those activities together.