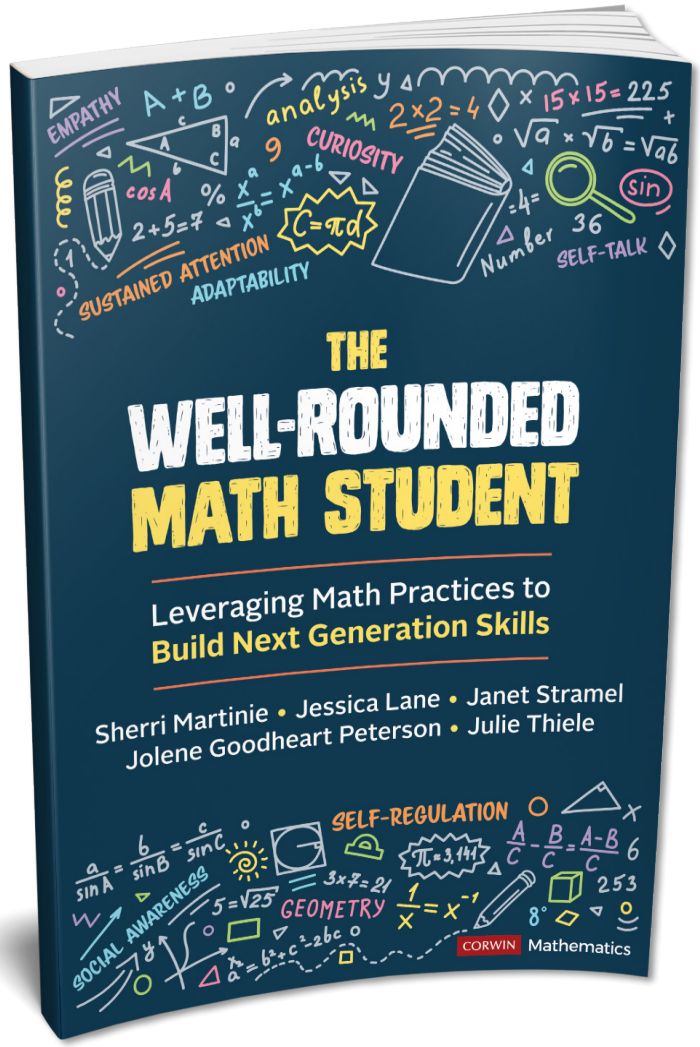

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INTRODUCTION

The Role of Intrapersonal and Interpersonal Competencies in Mathematics Education

YOU MIGHT HEAR SOMEONE SAY, "When I was in school, we didn't need this (social-emotional support)" or "I've been teaching for years and we weren't trained to do these kinds of things, we just teach." However, today's schools look different than they did even one or two decades ago, and the insights on what is needed have mostly been ignored by the profession (Prinstein & Etheir, 2022). In this chapter, we will explore the current state of schools, the changing needs of students, and the shift in education necessary to support today's learners. While teachers are still key in delivering content, especially in math, the role now must include supporting students' social-emotional development and helping them to hone those next generation skills that will be critical into their adulthood.

Specifically, this chapter will

- Discuss the shift toward holistic teaching, which includes integrating social-emotional skills into lessons.
- Guide you step-by-step to enhancing your lesson plans with small changes that promote these skills, showing how careful preplanning and simple adjustments can make a big difference to student engagement and learning with minimal effort.

A PARADIGM SHIFT IN EDUCATION

The world is changing fast, with global forces like technological advances and economic growth impacting our daily lives and requiring new skills to succeed in the future. Instruction must now focus not just on traditional subjects like math and reading, but also on teaching students how to think critically, solve problems, and work well with others.

Because of these global shifts, how we teach must evolve to help students develop the necessary skills to meet the demands of a complex and ever-changing world. This requires us to consider fundamental shifts in education in three ways: the shifting goals of education, the shifting needs of students and demands on schools, and the shifting role of the teacher as schools have become more of a hub for whole child support.

The Shifting Goals of Education

To better understand where we have been and where we are going, it's important to briefly understand how K–12 education has shifted over the past 20–25 years. In 2001, under the academic mandate of No Child Left Behind (NCLB), schools nationwide were driven by academic initiatives and outcomes that focused heavily on assessments and accreditation requirements. Educational outcomes were measured by testing and assessment, placing heightened pressure and emphasis on teachers and students to succeed in these academic areas of focus. High-stakes testing in math and English language arts (ELA) became the primary metric for evaluating the academic success of students, teachers, and schools. With hyperfocus placed on math and ELA outcomes, adjustments were made within the school day for extended time and prioritized resources for assessed courses. Schools and districts adopted testing resources, hired instructional coaches, and developed supplemental class sections and seminars to meet this initiative's demands (Lane, 2018).

As this approach of academic accountability continued, some unintended consequences emerged. Under the pressures of high stakes testing, teachers began "teaching to the test" or focusing mainly on helping students pass these tests. This made students pay more attention to getting the right answers, instead of understanding the material. In elementary schools, recess, physical education, and art classes were shortened or put on a rotating schedule so there could be more time for math and reading. In high school, math and reading were seen as the most important subjects, and time for other subjects was reduced. As NCLB continued, many states and schools saw the inherent challenges of this academic mandate and the need for a broader definition of academic success.

The Shifting Needs of Students and Demands on Schools

While schools focused more on test scores to measure success, students' social, emotional, and developmental needs didn't go away. In fact, student well-being diminished, and mental health challenges increased during this time (Centers for Disease Control and Prevention [CDC], 2024). The CDC's (2021) Youth Risk Behavior Surveillance System reported that from 2009 to 2019, even before the COVID-19 pandemic, many students experienced emotional distress, such as feeling persistently sad and hopeless (CDC, 2021; Prinstein & Ethier, 2022). Nearly every group of young people reported poor mental health during this time. Alarming trends showed that one in five students thought about suicide, and about 1 in 11 tried to take their own life

(CDC, 2021; Prinstein & Ethier, 2022). Concerns of bullying, cyberbullying, and school safety also grew. Unfortunately, while these experiences and behaviors were trending up, they were also largely ignored by education and health care (Prinstein & Ethier, 2022).

The growing mental health needs and behavioral challenges became even worse in 2020 because of the COVID-19 pandemic. When COVID-19 hit in the spring of 2020, people globally were left isolated and uncertain within their homes. Schools closed, as did the rest of the world, and remained so for at least the first several months of the pandemic—some much longer. Throughout the academic year of 2020–2021, educators created a variety of make-shift school formats and structures to accommodate learning—from in-person full time but socially distanced classrooms, to part in-person/part online hybrid learning structures, to fully remote learning. Structures differed by state, by district, and sometimes even by building. As a result, nearly all formats of schooling were very different from what students, teachers, and families had been used to (Jones et al., 2021). Resources for student support also differed by state, by district, and by building. The changes caused by the pandemic impacted all students, but they were especially harmful to the most vulnerable groups. Social development was stifled by a lack of interaction with others, and in many cases "connection" occurred from behind a screen (Lane et al., 2020). For many, there was little to no connection at all. Isolation and heightened unknowns—including food insecurity, unstable income and housing, anxiety and fear wrought by a contagious disease, and dealing with family members' illness and death—created additional pressures on student well-being and mental health (Bonella et al., 2020). Chronic absenteeism has also increased post COVID-19 (Swanson et al., 2024), impacting classroom instruction, student interactions, and academic outcomes.

SCHOOLS AS A HUB FOR WHOLE CHILD SUPPORT

As schools began to reopen, most educators (82 percent) said their biggest worry returning to the classroom was the social-emotional well-being of students, even more than academic issues (Bonella et al., 2020). The National Center for Education Statistics (NCES, 2022) reported that "classroom disruptions from student misconduct (56 percent), rowdiness outside of the classroom (48 percent), and acts of disrespect towards teachers and staff (48 percent)" increased (para. 2). One in five educators felt unprepared to provide social-emotional support to students (Bonella et al., 2020).

In fact, 70 percent of public schools surveyed requested more training to help students with their social-emotional development (Institute of Education Sciences [IES], 2022). This concern was the same in rural, urban, and suburban schools.

The social impact of isolation and gaps in social-emotional development and academic learning created by COVID-19 impacts all aspects of student development. COVID-19 influenced an increase in depressive symptoms, anxiety, and stress in students (Zarowski et al., 2024). While short-term government funding was provided to help schools connect students with the mental health support they needed, efforts often fell short. The need for support was so great that schools found it difficult to identify and hire enough qualified school counselors to meet the demand. Availability of youth mental health professionals became impacted and wait times to see a therapist *outside* of school could be as long as six months.

Today, 84 percent of teachers believe that social-emotional learning has a positive impact on academic achievement (Bushweller, 2022; NCES, 2022). There is recognition that serious and ongoing mental health issues requiring professional intervention can't easily be fixed in a classroom and teachers are *not* expected to become formal mental health providers. However, preventive and supportive efforts focused on social-emotional learning *create* a protective factor for student's mental wellness. Protective factors, such as positive relationships, lower the likelihood of negative outcomes to enhance mental well-being. This means classroom teachers need to be part of the effort to build or rebuild social-emotional skills in students, creating strong and supportive relationships to negate stress, trauma, and other obstacles that students face (Jones et al., 2021).

In reviewing recent educational history assessing where we were and where we are, we now have a clearer picture of where we need to go moving forward. Simply put, solely focusing on academics is an antiquated way of teaching and learning, and educators must evolve and adjust to successfully meet today's needs. With this newfound understanding, for today's classroom teacher to be as successful as possible, there must be a paradigm shift toward a more holistic and preventive response. The way forward can be found in social-emotional competencies embedded within the classroom, and the synergy and strength that comes from addressing academic, social-emotional competencies to maximize student outcomes.

Solely focusing on academics is an antiquated way of teaching and learning, and educators must evolve and adjust to successfully meet today's needs.

The Shifting Role of the Teacher

Given the recent changes and challenges in education, it's clear that a new, integrated approach to teaching and learning is essential. While the needs are known, how exactly to bridge the gap between academic and social-emotional needs remains a concern. Many educators acknowledge that they were not trained in social-emotional skill development or delivery in their preparatory programs, and more instruction within this area of teaching is necessary, as "all professionals who work with young people need the knowledge to support students" (Abrams, 2023). We know teachers already feel stretched thin between higher student needs, delivering engaging lessons, and the burden of "doing more with less." The real question is, "**How do we do this?"**

How do teachers

- Lift up and enhance what they are already doing well?
- Capitalize on the relationships and connections already developed?
- Look for opportunities to tweak, not overhaul, their lessons to incorporate and highlight social-emotional competencies and support the whole child?

This book is intended to help you understand this. While challenges are evident, so are many assets. First, we begin by holding a strengths-based mindset and approach—for both ourselves as teachers and our students. Never has the care, concern, and impact of teachers been more needed. As caring and invested adults, we are our greatest resource for student success and serve as one of the largest influencers of success and learning (Jimerson & Haddock, 2015). As mentioned at the beginning of this book, many K–12 teachers join the profession hoping to positively impact students' lives, just as another teacher did for them. Grounded in purpose and driven by their work, teachers teach, inspire, and provide care, consistency, and stability within their classroom each day. You can likely relate to this.

Teachers already use social-emotional competencies within their lessons and classrooms every day; it now simply becomes a matter of intentionally and explicitly enhancing the already present intrapersonal and interpersonal skills found within the lesson. Through careful preplanning and enhanced, integrative lesson planning, we can teach and model desired skills and outcomes. Time spent creating strong lesson plans can help with engagement, classroom management, behavior, and learning and can positively impact students' social and emotional well-being.

Through small adjustments, teachers can encourage connectedness and productive social behavior while also teaching critical math concepts. This small adjustment can have great gains, and doesn't require more money, more time, or another trendy program that is not followed with fidelity.

WHAT DO WE REALLY MEAN BY SOCIAL-EMOTIONAL COMPETENCIES?

Over the past two decades, social-emotional learning (SEL) has surfaced as an overarching term for several concepts including character education, 21st-century skills, soft skills, employability skills, social skills, and trauma-informed learning (Jones et al., 2021). According to the Collaborative for Academic, Social, and Emotional Learning (CASEL, n.d.a), the fundamentals of SEL states, "social-emotional learning (SEL) can help young people thrive personally and academically, develop and maintain positive relationships, become lifelong learners, and contribute to a more caring, just world." Social-emotional learning improves academic achievement (CASEL, n.d.b) and is a critical layer of prevention for children's mental wellness (CASEL, n.d.b).

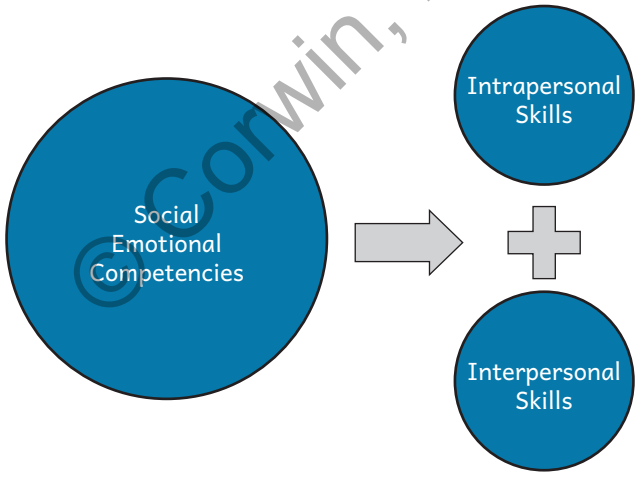
> **Social-emotional learning improves academic achievement and is a critical layer of prevention for children's mental wellness.**

Unfortunately, in recent years, some have tried to politicize and weaponize the term *social-emotional learning*. To be clear, regardless of packaging, social-emotional learning or competencies are not controversial (Prinstein & Ethier, 2022). Social-emotional learning are skills that help students better understand themselves and interact well with others. Teachers teach and model these skills to help students use them in different situations, both

in and out of the classroom. This helps make the classroom and school environment better and helps students have a more positive attitude about themselves, others, and school (Jones et al., 2021).

For this book's purpose, we offer terminology to help name and frame social-emotional competencies (SECs). Having a common language across lessons, classrooms, and grade levels reinforces and strengthens positive social-emotional competencies and behaviors. This shared understanding clarifies and amplifies these skills and enables K–12 teachers to better understand, apply, and integrate those skills into lessons. To the authors, social-emotional competencies are an overarching construct for the targeted skills needed to build and enhance healthy relationships. In Figure i.1, the SECs are the overarching theme, and the competencies are further broken down into two key concepts of intrapersonal and interpersonal skills.

Figure i.1 • *Social-Emotional Competencies*



There are several bodies of work that describe social-emotional competencies, including the CASEL competencies framework and the College and Career Competency Framework and Wheel (https://www.cccframework.org). Not one of these descriptions quite fits the bill, so we have derived our shared language from these places as well as others.

Intrapersonal Skills

Intrapersonal skills have two distinct purposes:

1. **Highlighting the Relationship with Ourselves and the Learning Process**:
   - **Purpose**: Intrapersonal skills emphasize the significance of our internal relationship with ourselves. This means understanding our own thoughts, emotions, and motivations.
   - **Importance**: By developing intrapersonal skills, we become more aware of our own learning processes, which helps us better manage our personal growth and development. Essentially, these skills help us reflect on our own experiences and understand how we learn and grow.
2. **Understanding Ourselves to Better Interact with Others**:
   - **Purpose**: Intrapersonal skills also emphasize the need to gain self-awareness to improve our interactions with others.
   - **Importance**: By understanding our own thoughts, feelings, and behaviors, we become better equipped to relate to others. This self-awareness enables us to communicate more effectively, empathize with others, and work collaboratively. In other words, knowing ourselves well helps us understand and connect with people around us more effectively.

In summary, intrapersonal skills help improve our understanding of ourselves and how we learn and enhance our ability to interact and work with others by first gaining self-awareness.

We selected the following intrapersonal skills (Table i.1) based on their connection to the mathematical practices (MPs) and based on their importance for success in mathematics.

Table i.1 • *Intrapersonal Skills*

Competency	Description
Creative Thinking	Students develop unique and meaningful alternative ideas to solve the problem. They see the ideas from multiple perspectives and brainstorm ideas to explore using concrete referents such as objects, drawings, diagrams, and abstract approaches.
Curiosity	Students seek to learn or to know something for its own sake; desiring information to fill knowledge gaps and welcome new experiences. They look for connections or patterns, practice trial and error, and try new approaches to solve mathematical problems.

Competency	Description
Goal Setting	Students establish objectives, monitor progress, and adjust strategies to achieve success. They develop a roadmap toward completing the mathematical problem within certain steps and a given timeframe.
Integrity	Students act with honesty, sincerity, fairness, and values. Teachers provide clear guidelines and high expectations, and students make strategic mathematical decisions that display academic honesty through the appropriate use of tools and strategies, and fairness with others.
Intrapersonal Communication (Self-Talk)	Students hold ongoing internal dialogue and reflective thinking by contextualizing a situation and considering how they would approach it. They use self-talk to think through and convince themselves before sharing an idea or making an argument.
Perseverance	Students persist and consistently work toward an outcome, even when difficult, until the result is achieved. They grapple with the mathematical process, working to determine the pattern or solve the problem.
Responsible Decision-Making	Students gather information, assess potential outcomes, and determine the best possible plan. They identify and consider options before making sound decisions about what steps to take, what tools would be useful, and if the outcome is reasonable.
Self-Awareness	Students hold a conscious understanding of one's own feelings, characteristics, thoughts, motivations, and desires. They are challenged to reflect on their feelings, thoughts, and values as they explore the truth of their conjectures and justify their conclusions.
Self-Efficacy	Students succeed in specific mathematical situations and tasks, which helps develop confidence in mathematical abilities. As students practice attending to precision and see improvements in their mathematical skills, they are likely to feel more confident in their ability to attempt future math problems.
Self-Regulation	Students manage thoughts, emotions, and behaviors during mathematical problem-solving, particularly in times of stress. They monitor their thoughts and emotions when they disagree with someone else's approach, and when giving and receiving feedback.
Sustained Attention	Students maintain focus and concentration over time. They engage in abstract and quantitative reasoning tasks, push through tedious processes such as decontextualization, looking for and generalizing patterns, working through the modeling process, attending to precision, and seeing the process through to the end.

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We encourage you to actively incorporate and emphasize intrapersonal skills in your lessons whenever possible. These skills are often underdeveloped and less visible but are crucial to students' overall development. Prioritizing intrapersonal skills in lesson planning helps students build self-awareness and apply these skills effectively in various situations. Like all skills, they need practice to grow and improve, as intrapersonal skills directly impact interpersonal and cognitive skills.

Interpersonal Skills

Interpersonal skills largely focus on communication and relationships with others. These skills are important because they are a part of everything we do in math and are useful in many areas of life. The math classroom is a key place for students to use, develop, and sharpen interpersonal communication skills. The following interpersonal skills (Table i.2) were selected based on their connection to the MPs and their importance for success in mathematics.

Developing and strengthening communication skills and teamwork is recommended across all math practices. Effectively communicating mathematical ideas and strategies with others, working together, sharing strategies, and learning from each other's approaches to problem-solving naturally fosters teamwork and cooperation. For this book's purpose, we do not focus much time on these skills since they are so naturally embedded, but instead intentionally focus on other interpersonal skills to highlight how those might be implemented into a lesson.

While some skills are clearly either intrapersonal or interpersonal, other skills draw from both skill sets and fall somewhere in between. For example,

- **Communication Skills**: Often seen as more of an interpersonal skill, communication is how you interact with others and interpret their responses. However, communication also involves intrapersonal aspects, such as how you understand and manage your own messages and emotions.
- **Decision-Making Skills**: These can also involve both intrapersonal elements (e.g., personal judgment and self-awareness) and interpersonal elements (e.g., considering others' opinions and collaborating with them).

Table i.2 • *Interpersonal Skills*

Competency	Definition
Adaptability	Students adjust to new conditions or challenges with ease by changing to respond to new information or circumstances. They detect errors, explore consequences, and compare predictions, which allow the adjustment to the mathematical model, problem-solving process, or solution.
Assertiveness	Students clearly express wants, needs, and thoughts while respecting others, even when difficult. They impart their own thoughts, mathematical critiques, and ideas in respectful ways and are treated with respect when doing so, even if there is disagreement.
Communication	Students effectively exchange ideas, thoughts, and feelings between two or more people. They mathematically express themselves with clear and accurate expressions, interpretation of symbols, attention to detail, effective explanations, and contextual understanding.
Empathy	Students seek to understand, share, and respect the feelings of others. They show concern when responding to the arguments of others by trying to comprehend from another perspective whether they agree or not.
Social Awareness	Students listen to, reflect, respond, and empathize with others' experiences to understand social norms and other diverse perspectives. They consider the contexts and backgrounds that influence others' ideas, perspectives, and contributions.
Teamwork	Students discuss approaches, fairly contribute, respect other teammates, and reach consensus toward a shared goal. They work with others by engaging in shared work to arrive at a mathematical product or answer.

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In summary, skills like communication and decision-making don't fit neatly into just one category. Instead, they lie on a continuum where they incorporate both intrapersonal and interpersonal elements. This means that these skills' development and application can be influenced by personal experiences and social interactions.

INTEGRATING SOCIAL-EMOTIONAL COMPETENCIES INTO OUR MATHEMATICS LESSONS

Integrating social-emotional competencies, or intrapersonal and interpersonal skills, into lessons means being aware of how to connect those skills to what we are teaching as important parts of learning. It's also important to note that, for many reasons, students may not possess these personal and social skills. Therefore, we as teachers must explicitly incorporate, teach, and scaffold these skills, even informally, to ensure their development.

In this book, we share a framework for planning a lesson that enables you to be intentional about amplifying SECs in your math classroom by integrating intrapersonal and interpersonal skills with the standards for mathematical practice. The goal is to help you build on what you already do naturally in your teaching by highlighting and making clear the intrapersonal and interpersonal connections and opportunities within the lesson. Lesson planning will be addressed in three parts: the standards for mathematical practice, social-emotional competencies, and the pedagogical decisions teachers make.

Each chapter is dedicated to one of the eight standards for mathematical practice. The chapter begins with the connection between specific content standards and the focus MP, as this is likely where you are most comfortable. Then, the overlap between the MP and SECs is provided and some intrapersonal and interpersonal skills that specifically engage in this MP are discussed.

Through each chapter is a framework of questions you can use as you plan a math lesson that merges content standards, MPs, and SECs—thereby resulting in a robust lesson plan template. To support your enhanced lesson plan development, the Well-Rounded Math Lesson Guide (Figure i.2) provides a comprehensive list of all the questions to consider as you develop your lesson.

Figure i.2 • *Well-Rounded Math Lesson Guide*

Topic:

Content Standard:

Math Goal:

What is the mathematical goal of the lesson?

Lesson Objective(s):

Launch/Introduction

Intrapersonal / Interpersonal Skills:

What intrapersonal and interpersonal skills are inherent, are needed, and can be further developed for students while engaging in the MP? How will I explicitly address SECs?

Math Practices:

Which mathematical practice enhances understanding of this content standard?

- ☐ MP1 Problem solve and persevere
- ☐ MP2 Reason abstractly and quantitatively
- ☐ MP3 Construct and critique arguments
- ☐ MP4 Model with math
- ☐ MP5 Use appropriate tools strategically
- ☐ MP6 Attend to precision
- ☐ MP7 Look for and make use of structure
- ☐ MP8 Look for and express patterns

Intrapersonal skills:

- ☐ Creative thinking
- ☐ Curiosity
- ☐ Decision-making
- ☐ Goal setting
- ☐ Integrity
- ☐ Perseverance
- ☐ Self-awareness
- ☐ Self-efficacy
- ☐ Self-regulation
- ☐ Self-talk
- ☐ Sustained attention

Lesson Activities: ***With an eye on our math goal, how will I support social-emotional development as I engage learners in the MP? What structures, strategies, methods, and/or tools can I use?***	Intrapersonal/ Interpersonal Skills:	Interpersonal skills: ☐ Adaptability ☐ Assertiveness ☐ Communication ☐ Empathy ☐ Social Awareness ☐ Teamwork
Summary/Closing:	Intrapersonal / Interpersonal Skills:	
Assessment: ***How will I assess students' progress toward the mathematical goal of this lesson, their engagement in the MP, and their ability to use and continue to apply SECs?*** ***How will I provide feedback?*** ***How will I build a chance for students to reflect on their skills?***	Intrapersonal / Interpersonal Skills:	

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BREAKING DOWN THE PROCESS

Successful lesson planning begins with purposeful preplanning. When developing holistic lessons that emphasize social, emotional, and cognitive learning, it is important to

1. Begin with the math content standards you will address.
2. Connect this with the mathematical practice outlined.

3. Determine the social-emotional competencies that naturally align.
4. Consider what is developmentally appropriate for the age group one is teaching.
5. Deliver the lesson and provide reflection to solidify learning by discussing the social-emotional skills used to meet the math components and looping around the lesson for reflection.

Beginning With Mathematical Content and Practice Standards

Regardless of location, today's modern mathematical standards in every state and province aim to develop mathematical concepts and skills more deeply and to engage learners more fully in thinking and doing mathematics than previous standards had done. All standards also carry with them some form of standards for mathematical practice. These are sometimes referred to as math practices, math processes, or process standards, and they apply broadly to K–12 students and describe the practices, habits, and expertise that characterize proficient mathematicians that we strive to develop in all students. They describe ways in which developing students can engage with mathematics in an increasingly more sophisticated manner as they mature, and their mathematical expertise grows throughout their education.

The first step of lesson planning is to ask,

- **What is the mathematical goal of the lesson?**
- **Which mathematical practice enhances understanding of this content standard?**

Each of this book's chapters begins by describing the overarching mathematical goal of the lesson and the corresponding math, followed by determining what mathematical practices stand out and/or what you want to emphasize. While there are opportunities to focus on several mathematical practices, being intentional about one practice supports the development of other mathematical practices because they are often intertwined with each other. Being intentional means planning for students to be engaged in mathematics in a specific way.

As you engage in the lesson planning process, this section will feel familiar and comfortable as this is how we have been trained to approach planning with a keen focus on the math content.

Elevating the Inherent Social-Emotional Competencies

Next, you will add to the traditional lesson plan by bringing the implicit intrapersonal and interpersonal skills to the forefront. Recall that in their simplest form, intrapersonal skills are knowing and regulating oneself, and interpersonal skills facilitate interaction with others (Glowiak & Mayfield, 2016). Remember, the addition of intrapersonal and interpersonal skills is not a change to the math goal, content, or standards, but a magnified lens to make the social-emotional competencies obvious. Math teaching is the foundation, and it becomes even stronger when combined with the natural social-emotional competencies that are part of the lesson.

Ask yourself,

- **What intrapersonal and interpersonal skills are inherent, are needed, and can be further developed for students while engaging in this MP?**
- **How will I explicitly address SECs?**

By consistently highlighting these skills, we help students reinforce concepts, connect cognitive and personal aspects, and encourage reflection in a seamless way. The opportunity to "name and frame" social-emotional competencies also emphasizes their interplay and importance within the lesson. Using shared language to identify these skills helps make them more intentional, familiar, and comfortable. This also gives students another way to connect with and understand the math content better. By drawing from, explicitly naming, and building on the social-emotional competencies embedded in a math lesson, we can shape, support, and complement them. We also know that some students have fears or beliefs that they are not strong or skilled in math. When leaning into and applying other skills (e.g., communicating, adaptability, perseverance) within a lesson, we can also support the student who may not feel as confident in learning math by encouraging them to implement intrapersonal and interpersonal skills to be resilient and successful with math.

> **By drawing from, explicitly naming, and building on the social-emotional competencies embedded in a math lesson, we can shape, support, and complement them.**

We begin by focusing on and determining intrapersonal skills and then identifying interpersonal skills. As you read the book, you'll find examples

that highlight a few skills within lessons. This doesn't mean other skills aren't relevant; these are just a few concrete examples of *many* possibilities. When developing your lesson, remember that it's important to focus on one or two SECs at a time and teach them explicitly so students can recognize and develop them.

Deciding on Instructional Structures and Engagement Strategies

Shifting toward planning, we ask ourselves, **"With an eye on our math goal, how will I support social-emotional development as I engage learners in this math practice? What structures, strategies, methods, and/or tools can I use?"**

After determining the key elements of the lesson through a holistic view where we begin with the math, and supporting the social-emotional competencies, we can consider how to engage students in the learning by using specific instructional strategies.

Assessing Progress Toward Mathematical Content, Practice, and Social-Emotional Goals

As we move into assessment, ask yourself, **"How will I assess students' progress toward the mathematics goal of this lesson, their engagement in the mathematical practice standard, and their ability to use and continue to apply social-emotional competencies? How will I provide feedback? How will I build a chance for students to reflect on their intrapersonal and interpersonal skills?"**

While math assessment can be either formal or informal, social-emotional competency assessment is largely informal. Due to its often undervalued status, lack of standardization, teachers' limited exposure, and the developmental and growth-based application, it is best to assess students' use of SECs informally.

Having regular, informal, individual check-ins with students regarding intrapersonal and interpersonal skills is a good way for students to practice social skills, develop rapport and connection between student and teacher, and allows for the student to authentically share their experience through effective communication. Formative assessment allows for immediate feedback throughout the lesson. As we observe student discussions or interactions, we can quickly gather insight into what students understand

and help boost correct answers or redirect and support other answers. These are actions to build into the lesson plan.

Students need feedback and an opportunity to reflect on their awareness and development in using various social-emotional competencies. When we know ourselves, we are better able to work well with and help others. Self-reflection is a practice that we should embed into student awareness, to help them understand and regulate their emotions and actions in various settings. To establish assessment criteria, identify actions we want to promote or instill on the part of the student.

> **Self-reflection is a practice that we should embed into student awareness, to help them understand and regulate their emotions and actions in various settings.**

THE LESSON PLANNING PROCESS

Figure i.3 illustrates lesson development that purposefully integrates social-emotional skill development and cycles back to ensure SEC support. The process starts with the math content, including the content standards and the standards for mathematical practice, enhances the social-emotional competencies to build the lesson plan, and then plans for assessment. The arrows on the top of the figure indicate the reflection of and tying back to previous decision points to inform planning and strengthen connections. After completion of the lesson, the arrow below illustrates the reflective process necessary to determine the effectiveness of the lesson in the given areas of math and intrapersonal and interpersonal growth.

As teachers, the adjustment to traditional teaching preparation is in the *intentional planning and acknowledgment of SECs*, naming them in the lesson, allowing time to model and discuss them, as well as reflecting on how students engaged in these actions.

As you can see, there is not a significant change in content and lesson development, but an added emphasis on drawing forth the implied skills that many teachers infer students already possess. This small adjustment in front-end planning on social-emotional competencies and enhanced lesson reflection can lend itself to greater rewards in the lesson and the classroom. This is a small shift in the traditional way of developing lessons, but it has the potential to deliver large returns in social, emotional, and cognitive learning,

Figure i.3 • *Reflective and Holistic Planning and Teaching*

and in ways that greatly benefit the learner and the teacher without being burdensome.

In the following chapters, we will focus on the process of applying this new approach to lesson planning by concentrating on the mathematical practice, the corresponding standards, and opportunities for amplifying the natural intrapersonal and interpersonal opportunities within a lesson.

Questions to Think About

1. In your own words, how do you define intrapersonal and interpersonal skills?
2. Consider lessons you already teach.
   a. How do you engage learners? What interpersonal activities come to mind?
   b. What reflective practices do you use? What intrapersonal activities come to mind?
3. How do you currently reinforce positive classroom behaviors?

Actions to Take

1. As you move through this book, consider some of your favorite lessons or favorite activities that you already enjoy teaching. By shifting your lens, you will likely notice in those lessons that you already have natural avenues for intrapersonal and interpersonal connections. Now consider how you might amplify or draw out those connections a bit more, by naming the skills and asking reflective questions to build a more holistic lesson that maximizes math content along with social-emotional competencies.