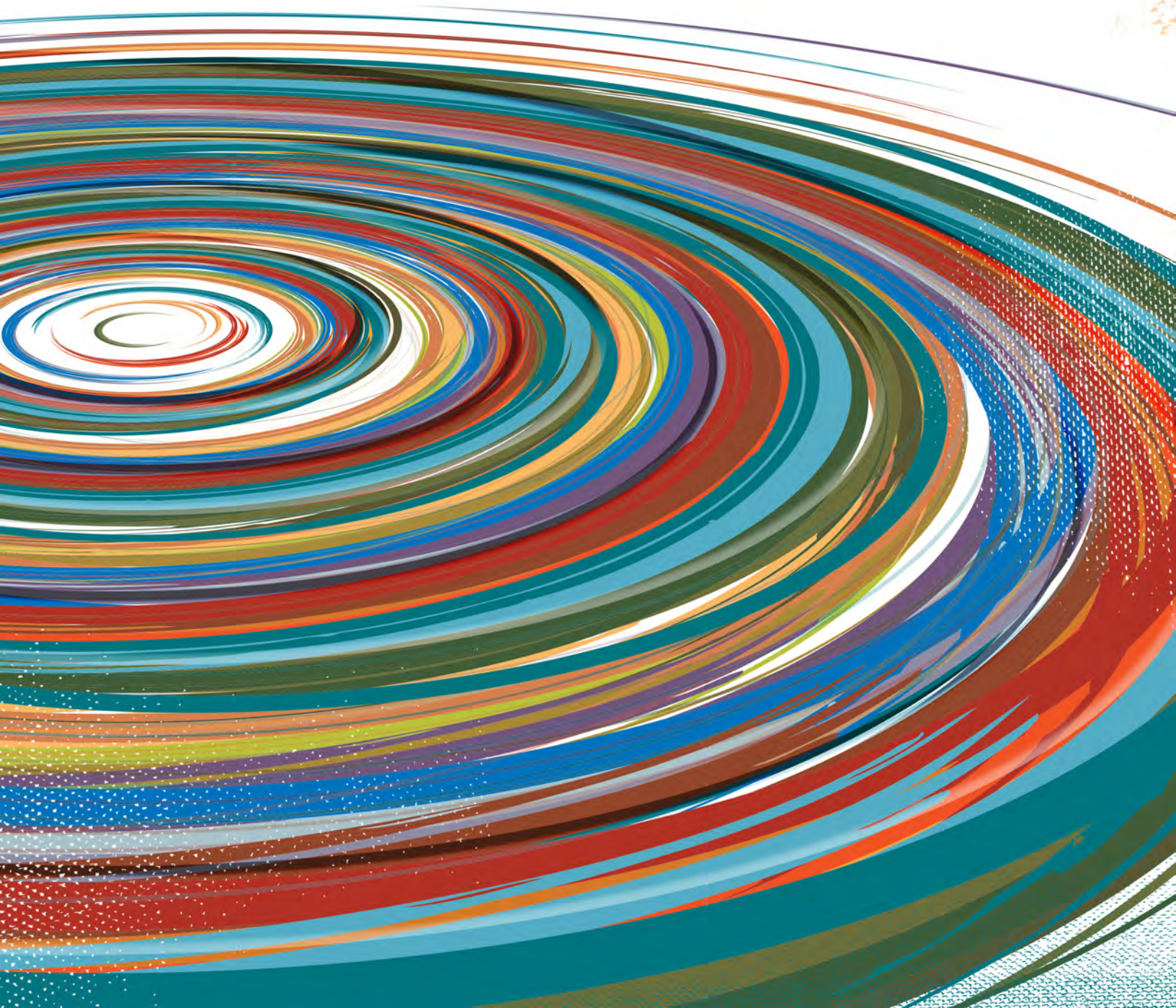
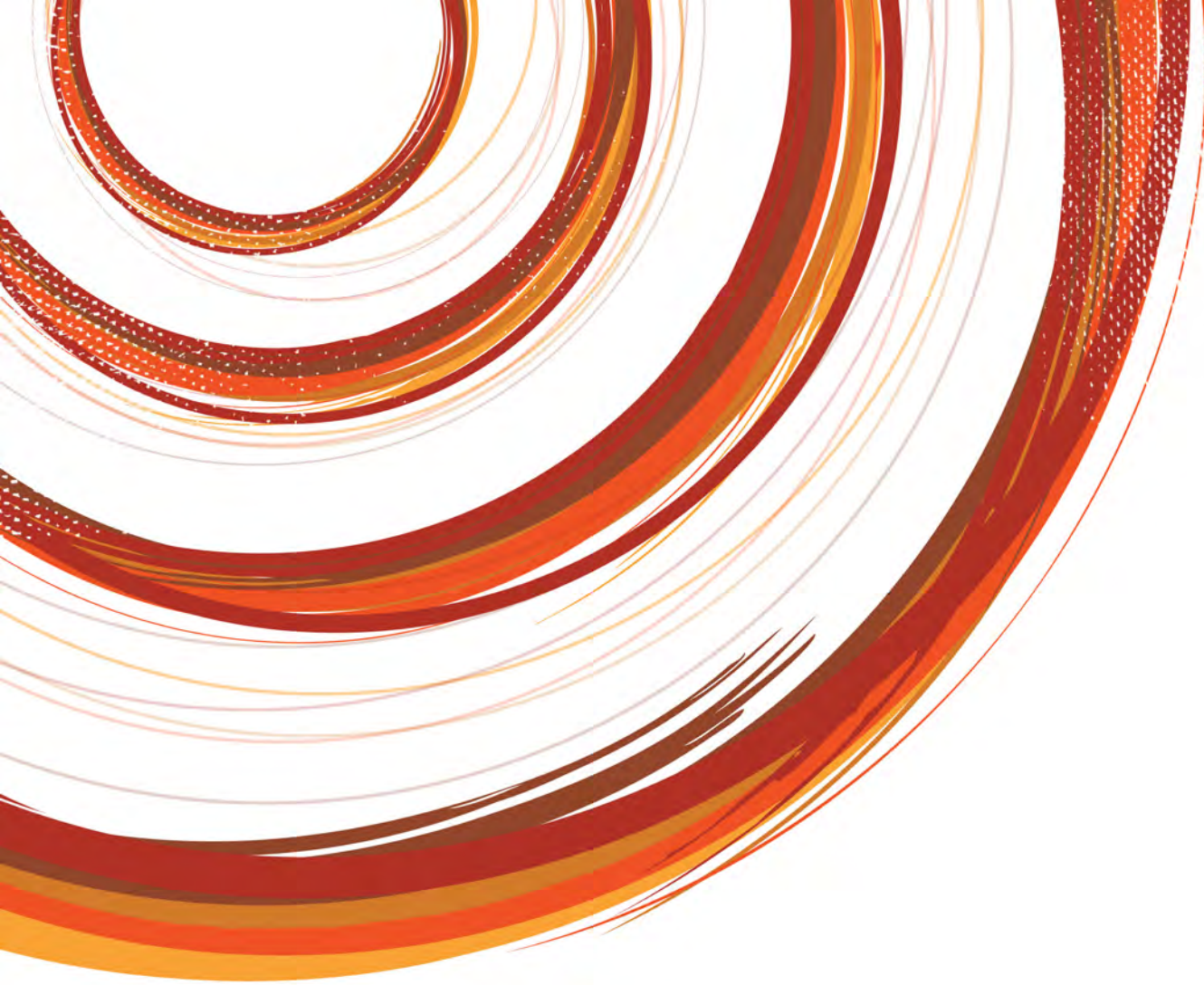


ESSENTIAL SKILLS AND DISPOSITIONS



COLLABORATION





An individual's capacity to work with other people in a process that requires interdependence to solve a problem, achieve a goal, or complete a task

COLLABORATION

Collaboration is a critical skill that requires the ability to balance mutual interdependence with personal ambitions. Developing this skill prepares students for the demands of many post-secondary pursuits. This skill framework emerges from recent research and the increasing need to balance development of content knowledge with the development of skills and dispositions critical to applying knowledge effectively. Collaboration incorporates the ability to work across cultural and language differences as well as the ability to navigate ever-changing virtual spaces that provide continuous opportunities for innovation and adaptation. Schools are laboratories for innovative collaboration. A shared understanding of what this skill fully entails will help enrich collaborative learning and access individual growth over time.

Purpose of the Framework

This framework presents a theoretical model of collaboration skill development to bridge the gap between existing theories and research and educators in the field who seek to build student's skillsets. It serves as a call for innovative educators to consider the complexity of skills, such as collaboration, and to help build a research base on cultivating students' collaborative behaviors from preschool to adulthood. Consumers of the framework will need to identify specific factors in the local teaching and learning context that impact the growth and demonstration of collaborative skills. By doing so, consumers can interpret and apply this framework to unique domains, contexts, and learning objectives.

From Beginner to Emerging Expert

At every age level from preschool to adulthood, an individual may fall along different stages of the developmental continuum for various dimensions of collaborative skill. To approach the expert level, collaboration, like other skills, requires extensive experience to advance most aspects of the skill to a level of raw intuition.

BEGINNERS show respect for different perspectives with some support and modeling, care about how others feel, and defer to the group for decision-making and task assignment.

ADVANCED BEGINNERS remain open to competing ideas from others, avoid conflict, cooperate to keep group work moving forward, and take turns with tasks to be fair.

STRATEGIC LEARNERS value all group member's perspectives, initiate compromise to move work forward, and build consensus to define roles and tasks that match group members' strengths.

EMERGING EXPERTS synthesize a group's best thinking, voice and address power imbalances in a group's dynamic, and anticipate conflicts in order to strengthen group cohesion.

**EMERGING
EXPERTS**

**STRATEGIC
LEARNERS**

**ADVANCED
BEGINNERS**

BEGINNERS

5 Components of Collaboration

Drawing on existing research and theory, this framework defines collaboration in terms of five components that can map onto a variety of learning contexts and settings. Beyond process aspects of collaboration, this framework highlights self-awareness, and monitoring and adapting behaviors as components that guide an individual's contributions to group dynamics and outcomes. The components listed on the following page are illustrated in terms of how individuals demonstrate collaboration through intrapersonal thinking processes, like reflection, as well as interpersonal engagement with others. Through deeper understanding of the multiple dimensions of the skill, individuals can focus in on the essential parts that make up the skill as a whole.

SELF-AWARENESS

Thinking through tasks, applying prior experience, understanding how own strengths fit into group dynamic and taking personal responsibility

COMMUNICATING

Speaking purposefully, listening actively, and contributing to group dialogue and encouraging participation of others

NEGOTIATING & DECISION-MAKING

Understanding and valuing multiple perspectives, managing conflict and own emotional response, and advocating for group fairness

CONTRIBUTING & SUPPORTING

Owning task assignments and work quality, sharing ideas, and providing feedback on the work and ideas of others

MONITORING & ADAPTING

Reflecting on progress, overcoming obstacles, adjusting emotional reaction, supporting others through challenges, and modifying approach to benefit the group

INTRAPERSONAL



INTERPERSONAL

Thinking through tasks, reflecting on own strengths and limitations, applying prior knowledge and identifying skills that fit the group work at hand.

SELF-AWARENESS

Understanding personal responsibility to the group's success. Considering familiar ways to optimize group strategies, norms, and processes to reach task goals.

Analyzing messages for implicit and explicit meaning, considering context and mode of communication. Noticing own expressive tendencies including body language, as signals of engagement and intent.

COMMUNICATING

Sharing own view of task, work in progress, and results found. Recognizing and verifying perspectives of others, finding commonalities and discrepancies. Facilitating shared understanding.

Modifying own position given new information from others. Compromising individual interest for the shared goals of the group. Accepting responsibility for group decisions and outcomes.

NEGOTIATING & DECISION-MAKING

Helping steer a course for group work, building consensus or acting alone. Mediating different viewpoints, noting the value of others' ideas. Cooperating to define and assign roles equitably.

Exhibiting a high standard for work quality. Demonstrating ownership of role and task completion. Considering feedback openly. Managing time on task and progress toward completion.

CONTRIBUTING & SUPPORTING

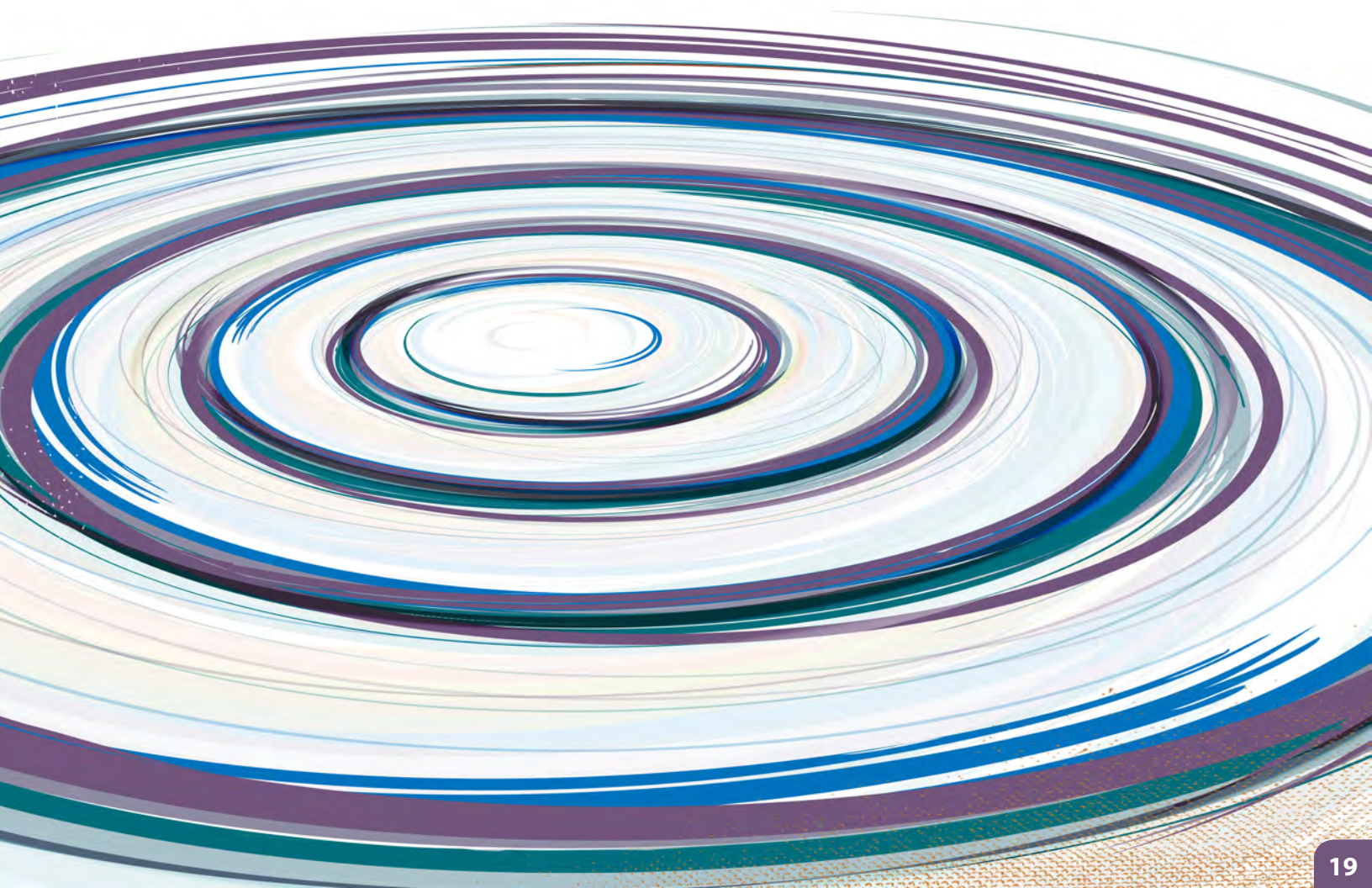
Establishing group approach to the problem. Determining and distributing tasks. Providing feedback and innovative ideas to advance work. Modeling work quality, task planning, and execution.

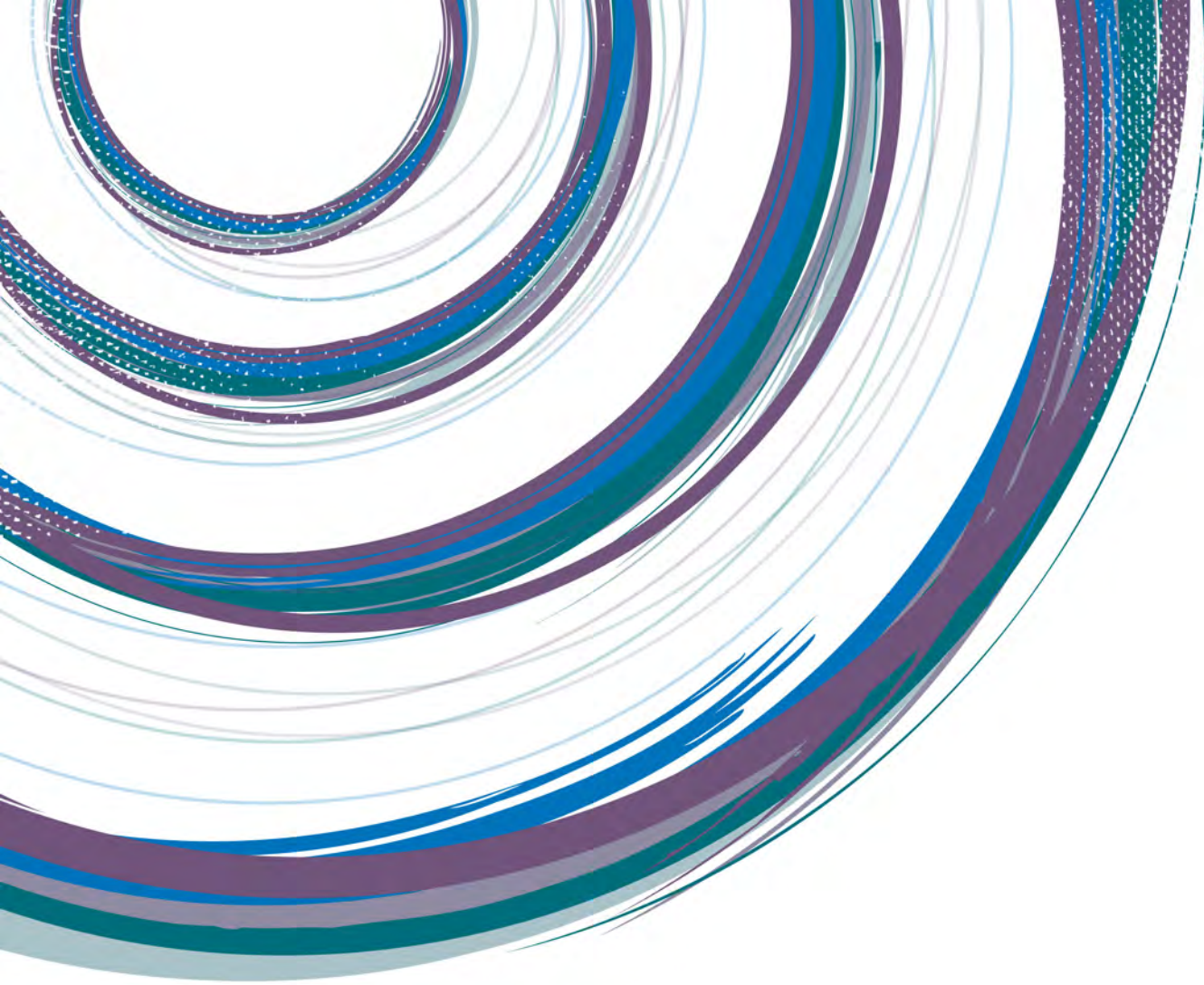
Tracking progress of individual tasks and success towards milestones. Addressing obstacles when they arise. Using challenges as opportunities to improve performance. Seeking out and using feedback effectively.

MONITORING & ADAPTING

Ongoing evaluation of task distribution, available resources, and group progress; modifying goals accordingly. Troubleshooting group strategy. Engaging group reflection on overall success.

COMMUNICATION





An individual's ability to leverage venue, mode, and audience to effectively convey meaning, discern and interpret messages, and signify understanding

COMMUNICATION

Communication has never been more complex and critical across sectors. Ongoing technological advances require adapting to new modes of communication in schools, work, and the rest of life. As these new advances continue, face-to-face communication becomes less relevant to task completion but no less critical to successful citizenship. The ability to communicate effectively relates to every discipline and content area in education; the skill is critical across college and career pathways. Meaningful engagement in a community, both within a classroom and outside of school, depends on strong communication through development of each element of the skill over time. To commit attention to the growth of this skill for students, we must recognize how the attributes are demonstrated and how each attribute maps onto the continually evolving methods of sharing and processing ideas effectively.

Purpose of the Framework

This framework presents a theoretical model of communication skill development to bridge the gap between existing theories and research and educators who seek to build students' skillsets. It serves as a call for innovative educators to consider the complexity of skills, such as communication, and to help build a research base on cultivating students' effective communication from preschool to adulthood. Consumers of the framework can identify specific factors in the local teaching and learning context that impact growth and demonstration of communication. By doing so, consumers can interpret and apply this framework to unique domains and contexts, developing and testing a variety of learning materials.

From Beginner to Emerging Expert

A wide range of skill development exists between the basic ability to construct and comprehend everyday messages and the capacity to anticipate and shape an audience's reaction and discern implicit meaning. Development toward expertise is shaped by the depth of experience a learner gains within a given context, acquiring vocabulary, understanding norms, and interpreting cultural undertones.

BEGINNERS explore various modes of communication, attend to messages, understand and convey explicit meaning, imitate observed conventions, and try different approaches with support.

ADVANCED BEGINNERS distinguish between formal and informal contexts, are aware of own body language, comprehend implicit meaning with support, and monitor their engagement.

STRATEGIC LEARNERS are aware of their tendencies, reflect on unintended impact on others, use context specific language fluidly, evaluate how they interpret messages, nurture a personal style, and regulate and adjust their approach.

EMERGING EXPERTS leverage experience to refine goals and approach, develop an interpretive lens to infer meaning given the context, tailor content, format, and delivery to audience, and optimize own emotions to elicit intended response.



EMERGING EXPERTS

STRATEGIC LEARNERS

ADVANCED BEGINNERS

BEGINNERS

5 Components of Communication

Drawing on existing research and theory, this framework describes communication as a set of components. In addition to commonly perceived aspects of communication, this framework emphasizes context as the filter for communication choices and highlights metacognitive skills such as self-awareness and monitoring and adapting behavior. The components listed on the following page are illustrated in terms of how individuals demonstrate communication skills through interpersonal thinking processes, like reflection, as well as interpersonal engagement.

SELF-AWARENESS

Reflecting on strengths and challenges conveying and interpreting meaning.
Understanding how communication choices affect others.

CONTEXT & MESSAGE

Analyzing context as the basis for interpreting and planning messages, content, and framing. Code-switching to enhance clarity and impact in various contexts

ESTABLISHING MEANING

Evaluating sources, using compelling examples, choosing effective formats to establish credibility. Receiving information and perspectives, drawing on own experience and knowledge to interpret effectively

DELIVERY & EXPRESSION

Choosing best mode for purpose, speaking and writing clearly, and impacting audience through style. Using and interpreting body language, tone, and volume as means for expression.

MONITORING & ADAPTING

Initiating and maintaining engagement, regulating emotional response, and adjusting approach or perspective to enhance understanding

INTRAPERSONAL



INTERPERSONAL

Reflecting on past experience to recognize own communication strengths and growth areas within distinct modes, venues, and audiences.

SELF-AWARENESS

Understanding inadvertent and intentional impact on others as a result of own communication choices including: content, body language, tone, delivery, and mode.

Interpreting messages within context, considering source, word choice, venue, and mode of communication. Understanding domain- and/or context- specific terminology.

CONTEXT & MESSAGE

Tailoring own messages to the audience, venue, and mode of communication. Approaching word choice intentionally and code-switching to enhance clarity and impact.

Analyzing received messages for implicit and explicit meaning. Evaluating the quality of support used to convey meaning. Assessing accuracy of own interpretation given the context.

ESTABLISHING MEANING

Drawing on compelling examples, anecdotes, analogies, or other forms of support to clarify meaning, strengthen message, and evoke intended responses, specific to audience and context.

Considering speaker's body language, tone, volume when interpreting messages. Nurturing personal style and technique. Taking risks to convey perspective with ownership and courage.

DELIVERY & EXPRESSION

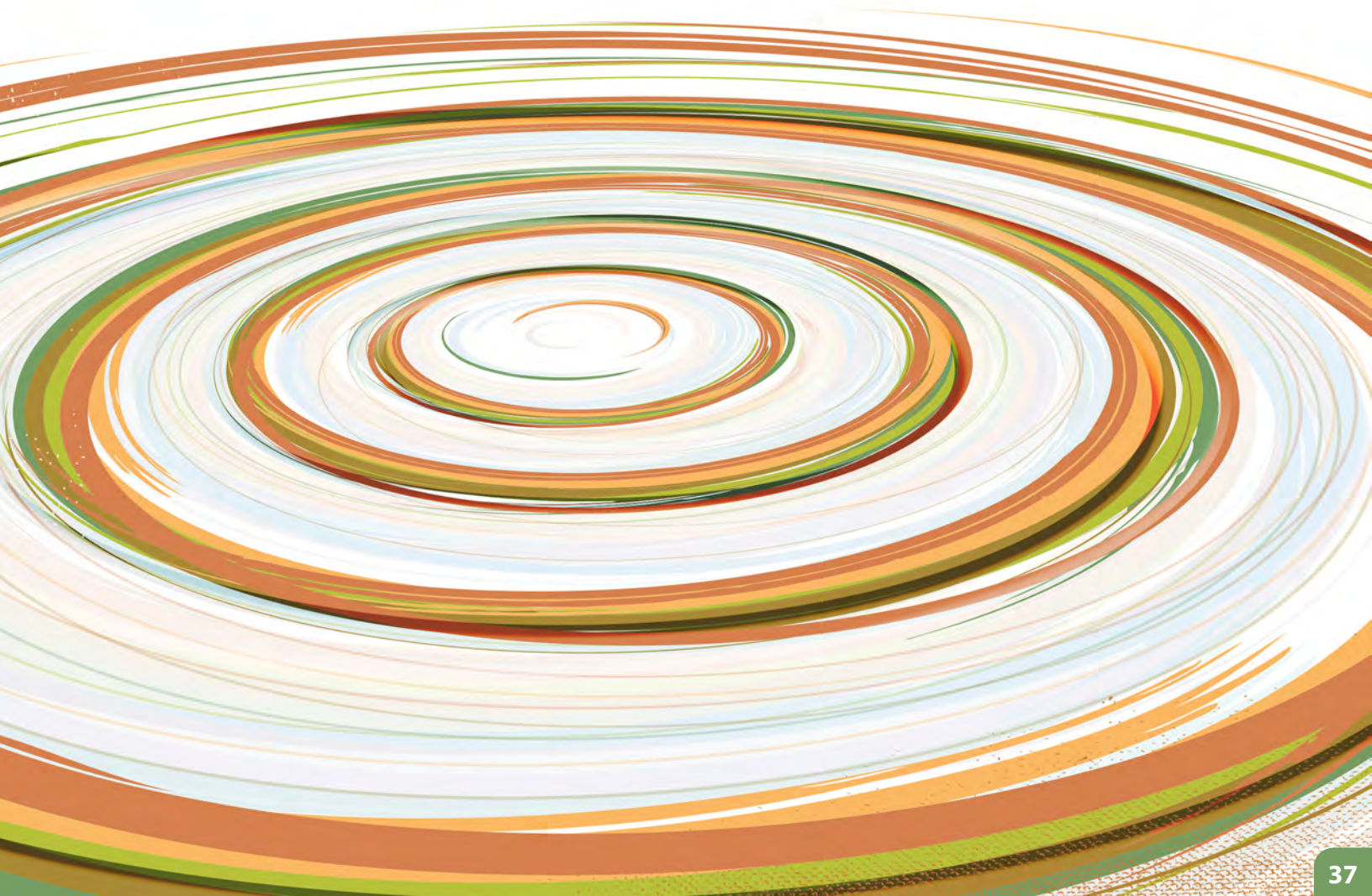
Organizing format and ideas to engage others effectively. Expressing own clear and effective style. Consciously using words, volume, tone, and body language to convey and enhance meaning.

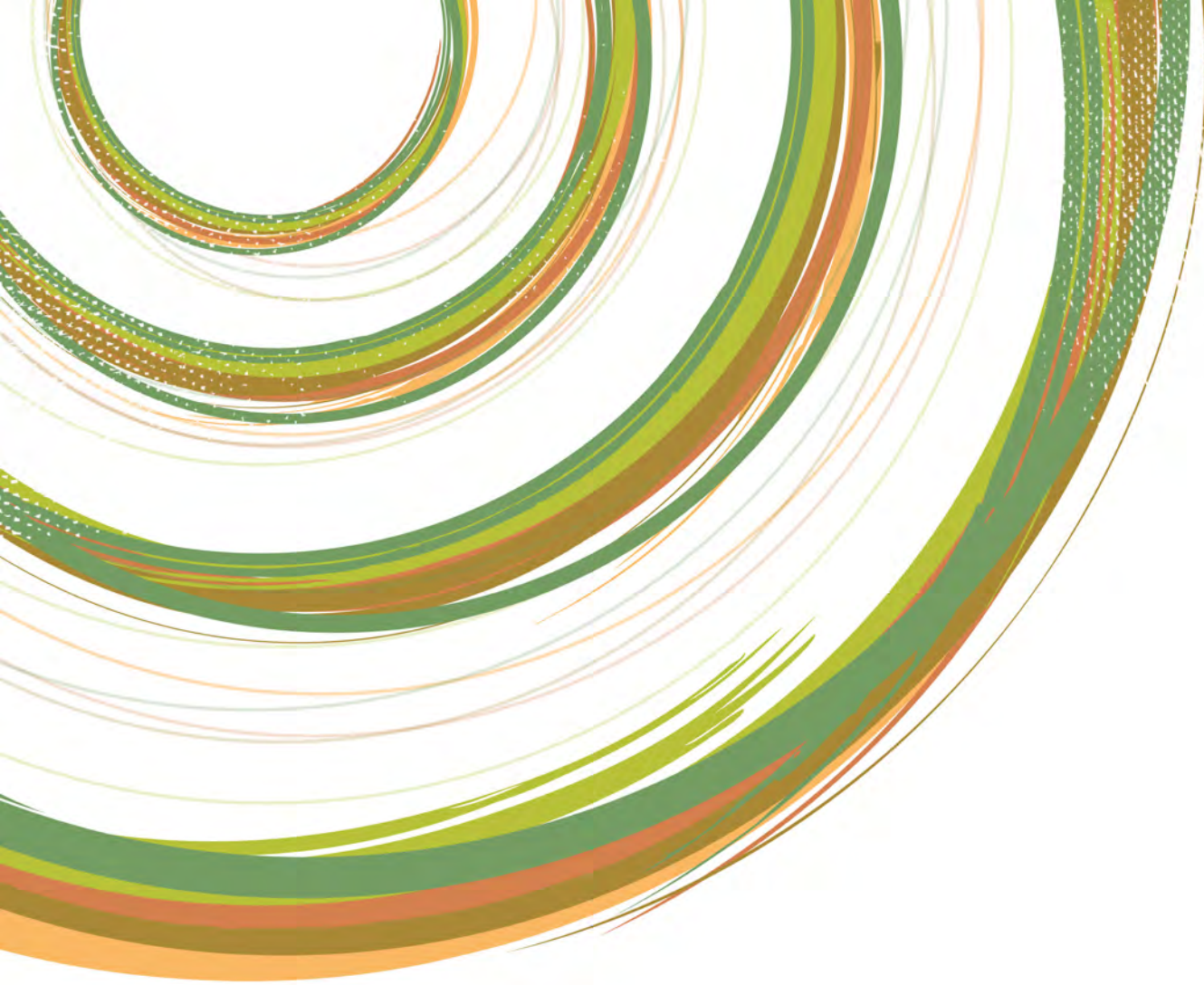
Evaluating own active engagement, participation, and understanding. Regulating emotional response. Revising and refining approach and practicing techniques to learn and use new conventions.

MONITORING & ADAPTING

Identifying and responding to nonverbal cues and the emotional response of others. Seeking feedback and adjusting perspective. Initiating engagement with others to enhance interaction.

CREATIVITY





An individual's ability to personally interpret experiences, discover new possibilities, and create solutions that are novel, useful, and valued by the world around them

CREATIVITY

Creativity is prized across disciplines. Creative insights are the seeds of many innovations, whether in school, work, or everyday life. Though the arts have long been viewed as the venue for transforming creative possibilities into creative acts, individuals regularly find innovative solutions to their own everyday problems. Employers want innovative problem-solvers. They seek out candidates who can contribute ideas, both novel and useful, and apply them in functional ways. Now more than ever, research suggests that creativity is a learnable skill. With effort and feedback, individuals make unique connections and meaningful insights, experiment with possibilities, reflect on the learning process, and grow more confident to take risks. This growth requires awareness of strengths and experience. The ability to apply knowledge and experience to challenges and capitalize on insights is a defining feature of creativity development. When detailed as a set of components, creativity can be more clearly understood and carefully nurtured.

Purpose of the Framework

This framework presents a theoretical model of creativity skill development to bridge the gap between existing theories and research and educator's in the field who seek to build student's skillsets. It serves as a call for innovative educators to consider the complexity of skills, such as creativity, and to help build a research base on cultivating students' creative behaviors from preschool to adulthood. Consumers of the framework will need to identify specific factors in the local teaching and learning context that impact the growth and demonstration of creativity skills. By doing so, consumers can interpret and apply this framework to unique domains, contexts, and learning objectives.

From Beginner to Emerging Expert

Between everyday insights and significant contributions in the world, a wide developmental range exists in creativity. To approach the expert level, creativity, like other skills, requires the dedication of thousands of hours to a discipline or domain, advancing insights and innovation to a level of raw intuition.

BEGINNERS work within rules rather than from intuition, persist through unfamiliar experiences with support, identify unique interpretations, begin to develop confidence to take risks, and use feedback to understand when ideas are impractical or irrelevant.

ADVANCED BEGINNERS notice opportunities for small changes to accepted norms, try to persist when ideas are unpopular or unusual, tolerate less structure in their learning, and consider new perspectives shared by others.

STRATEGIC LEARNERS tolerate ambiguity in their learning, evaluate the context and boundaries, and navigate between what is personally meaningful and valued by others.

EMERGING EXPERTS develop intuition in a domain, construct new, open-ended challenges, question accepted approaches, and carry ideas in risky and radical new directions.



EMERGING EXPERTS

STRATEGIC LEARNERS

ADVANCED BEGINNERS

BEGINNERS

5 Components of Creativity

Drawing on existing research and theory, this framework defines creativity in terms of five components that can map onto a variety of learning contexts and modes of exploration and expression. Among elements of creativity, this framework highlights self-awareness as well as monitoring and adapting behaviors to clarify the interconnectedness between creative thinking and doing. The components listed on the following page are illustrated in terms of how individuals demonstrate creativity through intrapersonal thinking processes, like reflection, as well as interpersonal engagement with others.

SELF-AWARENESS

Thinking about personal interests, strengths, inhibitions, and past experiences throughout the creative process. Using prior understanding and knowledge to formulate and prepare meaningful problems or challenges.

CULTIVATING & EVALUATING IDEAS

Seizing personally meaningful insights and connections to imagine new possibilities, evaluating ideas for both novelty and effectiveness, testing boundaries, and identifying constraints.

TOLERATING RISK & AMBIGUITY

Dealing with uncertainty, taking risks, and balancing novel possibilities with limitations and norms throughout the creative process

EXPERIMENTING & VALIDATING

Creating and producing to test and analyze the relevance and effectiveness of an idea. Overcoming setbacks, innovating through an iterative cycle, and communicating idea to understand the perspective of others.

REFLECTING & ADAPTING

Recognizing patterns and growth in own work and ideas, integrating feedback and ideas of others, continuing to seek out new experiences, and developing a driving purpose and a deeper understanding of context.

INTRAPERSONAL



INTERPERSONAL

Recognizing and valuing personally meaningful interpretations and insights. Discovering and developing interests. Noticing sources of motivation and strategies that nurture insights.

SELF-AWARENESS

Noticing opportunities for original ideas in the environment or work of others. Considering own responsibility in impacting others. Identifying assets and limitations within network of support.

Drawing on experience to interpret a problem or challenge. Playing with possibilities, deferring judgment. Evaluating novelty and effectiveness of ideas, elaborating and refining best choice.

CULTIVATING & EVALUATING IDEAS

Questioning assumptions and norms. Strategically incorporating ideas different from own. Breaking boundaries, gaining acceptance for untested possibilities through effective persuasion.

Dealing with uncertainty and pursuing sensible level of risk. Learning from mistakes. Negotiating between originality of ideas, limitations of personal skill, and the constraints of the medium.

TOLERATING RISK & AMBIGUITY

Navigating between personal meaning and the values of others. Evaluating context, determining boundaries to push. Knowing when to persist or change approach when challenged by social norms.

Creating a prototype of the idea. Testing effectiveness and refining solution. Committing time and effort towards completion. Developing confidence and originality through practice.

EXPERIMENTING & VALIDATING

Selecting environments that foster experimentation. Discovering resources to test and validate idea. Seeking specific feedback to enhance approach. Illustrating results and evolution of ideas.

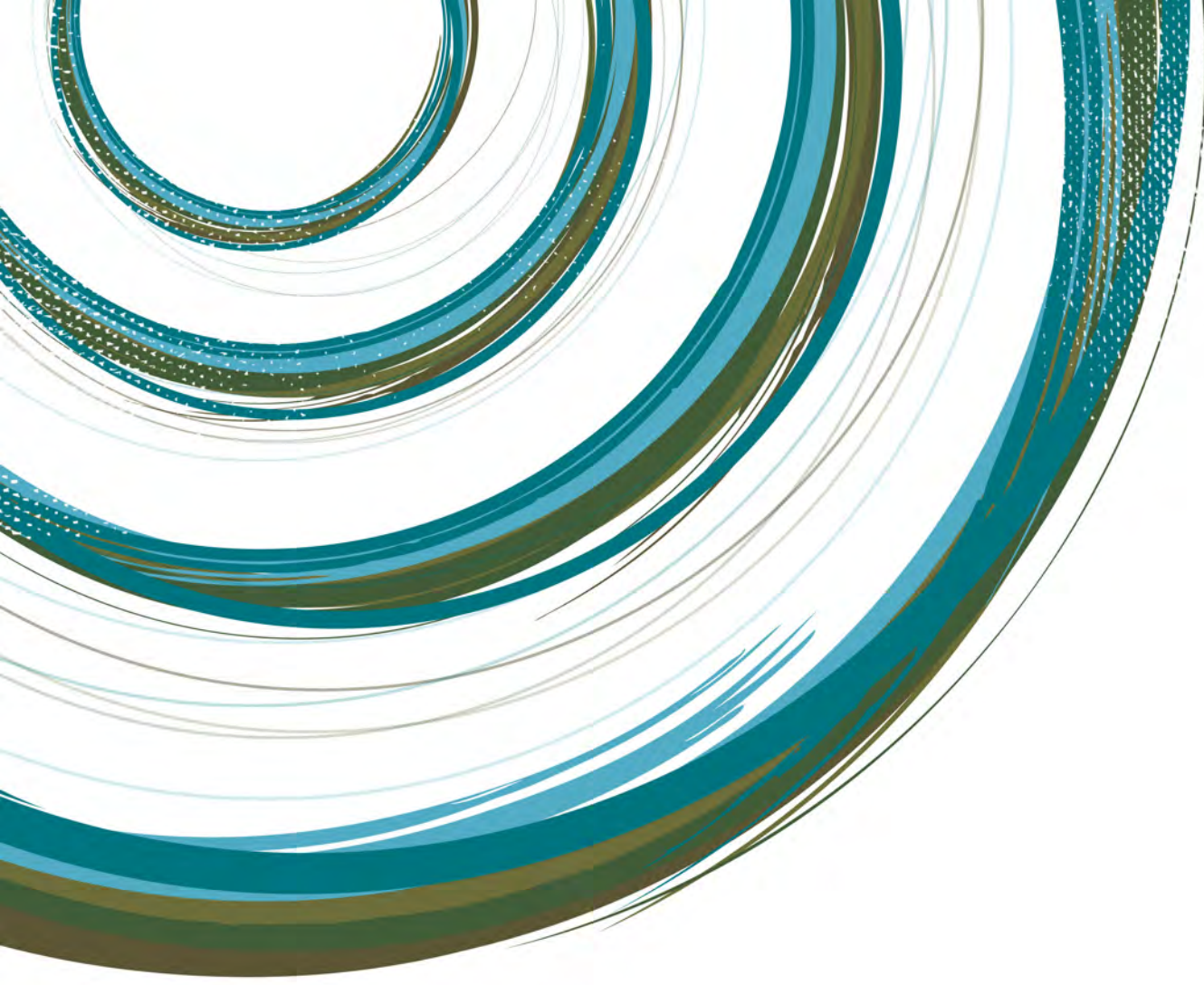
Surmounting inhibitions, learning and persisting through mistakes. Analyzing own work, finding meaning, and refining ideas. Remaining alert to new opportunities. Evaluating personal growth.

REFLECTING & ADAPTING

Shifting work patterns to changing parameters. Reflecting on contextual constraints. Considering the impact of ideas and work on self and others. Collaborating to consider future possibilities.



SELF-DIRECTION



An individual's ability to self-regulate, find value in structured and self-initiated tasks, and capitalize on failure; evaluating and collaboratively steering learning toward long-term goals and aspirations

SELF-DIRECTION

Self-Direction in learning is a growing expectation of day-to-day life and a necessary skill sought by employers as a result of ongoing advancements in information technology. The Internet provides quick access to interactive research, video tutorials, online courses, and real-time communication with fellow learners or experts across the globe. Yet, information is only as useful as it is thoughtfully considered and applied. Formal education, once the primary venue for disseminating information, increasingly serves to build student capacity in purposefully and successfully navigating the modern information age. Recognizing the components of self-direction in action opens the door to fostering students' independent evaluation and application of information.

Self-direction incorporates task management, emotional self-regulation, and strategic selection and direction of learning pursuits. Over time, skillful self-direction steadily deepens interests and develops personal goals.

Purpose of the Framework

This framework presents a theoretical model of self-direction skill development to bridge the gap between existing theories and research and educators who seek to build students' skillsets. It serves as a call for innovative educators to consider the complexity of skills, such as self-directed learning, and to help build a research base on cultivating students' effective self-direction from pre-school to adulthood. Consumers of the framework can identify specific factors in the local teaching and learning context that impact growth and demonstration of self-direction. By doing so, consumers can interpret and apply this framework to unique domains and contexts, developing and testing a variety of learning materials.

From Beginner to Emerging Expert

The spectrum of development between beginner and emerging expert reflects both degrees in ability to regulate and oversee a learning task, as well as a range in initiative and self-awareness that allows pursuit of learning in purposeful and personally meaningful ways.

BEGINNERS respond to opportunities to identify and distinguish learning goals from performance goals, establish a plan, and monitor their progress. Beginners express and explore interests, imitate strategies used by others, and are extrinsically motivated unless the learning opportunity aligns with existing interests.

ADVANCED BEGINNERS seek opportunities aligned with interests. They develop project-specific learning goals, plan, and regulate with help, seeking support when needed.

STRATEGIC LEARNERS draw on their learning strategies to plan, monitor, and adjust the learning process, while looking for ways to meet personally meaningful goals. They attribute success and failure to effort, effectiveness, or motivation rather than ability.

EMERGING EXPERTS reflect on past experience, strengths, long-term goals and aspirations to analyze learning opportunities for ways to optimize the process, outcome, and their development. They pursue collaborative opportunities with purpose to enhance their learning and growth.



**EMERGING
EXPERTS**

**STRATEGIC
LEARNERS**

**ADVANCED
BEGINNERS**

BEGINNERS

5 Components of Self-Direction

Drawing on existing research and theory, this framework describes self-direction as a set of components. In addition to initiative, planning, and goal-setting, this framework emphasizes critical metacognitive skills. Self-awareness and the ability to monitor and adapt serve as pivotal pieces that give behavior purpose and the potential for success. The components listed on the following page are illustrated in terms of how individuals demonstrate self-directed learning skills through intrapersonal thinking processes, like reflection, as well as interpersonal engagement.

SELF-AWARENESS

Reflecting on past experiences to evaluate own strengths, limitations, motivation, interests, and aspirations within different learning contexts.

INITIATIVE & OWNERSHIP

Taking responsibility for learning, finding purposeful driving questions, shaping opportunities to fit personal interests and learning style, and seeking input from others.

GOAL-SETTING & PLANNING

Developing meaningful learning targets and long-term goals, identifying effective strategies, and planning out steps.

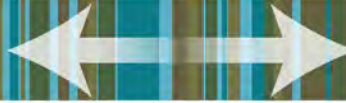
ENGAGING & MANAGING

Seeking out relevant resources and information to support learning goals, refining strategies, and maintaining effective pace, reaching short-term benchmarks and long-term goals.

MONITORING & ADAPTING

Evaluating progress, adapting strategies, seizing failure, building from mistakes, and attributing success to effort and motivation.

INTRAPERSONAL



INTERPERSONAL

Considering own experience, strengths, learning strategies, areas for growth, interests, aspirations, and sources of motivation.

SELF-AWARENESS

Evaluating own learning expectations and optimal application of strategies, given contextual norms, resources, and the roles and expectations of others.

Owning learning objectives. Drawing on experience and observation to direct learning in new directions, and pursue driving questions to focus understanding.

INITIATIVE & OWNERSHIP

Valuing learning opportunities that differ from own interests and goals. Cooperating with others to share oversight of learning direction, when appropriate.

Embracing opportunities for personally meaningful learning goals. Identifying challenging short- and long-term objectives, relevant strategies, and alternate steps to outcome expectations.

GOAL-SETTING & PLANNING

Assessing needs to determine and select available and appropriate resources. Confirming value of goals and plans through feedback and observation of others.

Analyzing and applying new information, managing time avoiding frustration and procrastination, and adjusting pace to meet learning targets and quality standards.

ENGAGING & MANAGING

Seeking appropriate high quality resources to pursue driving questions, solve problems, validate conclusions, and investigate new opportunities. Pursuing help when needed.

Evaluating progress to goals. Assessing and adapting strategies to enhance effects. Attributing success and failure to approach and motivation, not innate ability or talent.

MONITORING & ADAPTING

Strategically applying suggestions from others, improving effectiveness of approach. Seeking feedback to validate milestones and learning outcomes.