Wayfinding Abilities
for Destinations Unknown

Report 10 of the MyWays Student Success Series

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for Next Generation Learning Challenges

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The MyWays™ Student Success Series

All reports in the series are available for download at myways.nextgenlearning.org/report.

About this report

Report 10, *Wayfinding Abilities — for Destinations Unknown*, considers the Wayfinding Abilities domain of the MyWays Student Success Framework, including why, in an age of accelerations, the domain merits equal standing with the other three domains, key principles for implementation, and the state of play in the field, as well as offering resources and essential one-page primers for each competency.

Report 10 is the last of five reports in Part B of the *MyWays Student Success Series*. **Part B, "Broader, Deeper Competencies for Student Success,"** provides a composite definition of student success in learning, work, and life, drawing on over 25 highly-regarded frameworks and the literature in the education, work, and human development fields.

The *MyWays Student Success Series* examines the through-line of four essential questions for next generation learning and provides research and practice-based support to help school designers and educators to answer these questions. The series consists of 12 reports organized into three parts, plus a Visual Summary and Introduction and Overview.

The **primary researchers and authors** of the *MyWays Student Success Series* are Dave Lash, Principal at Dave Lash & Company, and Grace Belfiore, D.Phil., Principal Consultant at Belfiore Education Consulting.

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REPORT 10

Wayfinding Abilities – for Destinations Unknown

Introduction

MyWays characterizes Wayfinding Abilities as "knowledge and capacity to successfully navigate learning, work, and life opportunities and choices." Although Wayfinding competencies (see box to the right) are critically important to the lives our students will lead, this domain is the least likely to be included in existing competency frameworks. Yet attention to these skills is gathering in interesting and unlikely places.

In this report, we will provide an overview of the domain by covering the following:

- Why the Wayfinding Abilities domain is so important
- An overview of the five competencies that make up Wayfinding Abilities
- Three key principles for addressing Wayfinding Abilities
- A brief summary of the state of play in Wayfinding Abilities learning and assessment
- A quick resource dive for Wayfinding Abilities (highlighting starter resources, competency frameworks, and school models that address Wayfinding Abilities)
- Five one-page Wayfinding Abilities competency primers

Wayfinding Abilities

Knowledge and capacity to successfully navigate college, career, and life opportunities and choices

Wayfinding Abilities competencies:
- **Survey the Learn, Work, & Life Landscapes**
- **Identify Opportunities & Set Goals**
- **Design & Iterate Prototype Experiences**
- **Find Needed Help & Resources**
- **Navigate Each Stage of the Journey**

In researching this domain, we drew on three approaches to helping learners navigate to their futures. **School-based college and career counseling** has traditionally focused on helping students choose a defined path — a career, college major, or postsecondary school. **Design-based career and life development** helps people learn how to excel at life transitions and bootstrap a career in today's more complex landscape. You will find in this report suggestions for both the "plan then implement" tools of traditional career counseling, which still have some value within the larger context, and the "design forward" — prototype, fail fast, learn to be agile — wayfinding of the future. Lastly, we also drew on **successful entrepreneurship practices** because they illuminate how people with limited means are able to successfully pursue opportunity despite uncertain conditions. Together, the Wayfinding Abilities comprise a flexible toolkit for managing short- and long-term transitions in one's life, developing the skills to navigate the work/learn landscape, and initiating a work path or a business. In this report, we focus primarily on the use of these competencies in navigating on-ramps to the work/learn landscape.

Making Your Best Way Forward

"Wayfinding is the ancient art of figuring out where you are going when you don't actually know your destination. For wayfinding, you need a compass and you need a direction. Not a map — a direction. Think of the American explorers Lewis and Clark. They didn't have a map when Jefferson sent them out to travel through the land acquired in the Louisiana Purchase and make their way to the Pacific…

*"Wayfinding your life is similar. Since there's no one destination in life, you can't put your goal into your GPS and get the turn-by-turn directions for how to get there. What you can do is **pay attention to the clues in front of you, and make your best way forward with the tools you have at hand**. [emphasis added]"*

—**Bill Burnett and Dave Evans,** *Designing Your Life*[1]

Students from every corner of American society share — though by no means equally — a disadvantage: their schools are unlikely to give them much help in developing the abilities to "wayfind their lives."

Patrick Cook-Deegan, an education innovation fellow at the Stanford d.school K-12 Lab, had this to say about working in high-performing Palo Alto high schools: "Over the past decade, I have had the chance to ask thousands of teenagers what they think about school. I've found that the vast majority of them generally feel one of two ways: disengaged or incredibly pressured. **One thing nearly all teens agree on is that most of what high school teaches them is irrelevant to their lives outside of school or their future careers."**

Meanwhile, Robert Halpern cites an illuminating study of one group of working-class youth, which found that, "among many in the sample, accounts of their lives and thoughts about the future were fragmentary, shifting, and ungrounded. Typically, they viewed the future in overly simplistic terms: either college success or a dead-end job… Young people shape and reshape their lives in relation to what they can see**… Many youth simply do not feel ready and able to make good choices… yet, uncertainty about career aspirations more often than not reflects lack of knowledge about postsecondary education and the occupational world."**

"A young person," he concludes, "cannot make mature decisions if she has not had experiences that foster maturity. A young person cannot explore occupational roles if she is unconnected to the means for exploration."[2]

Given the rapidly shifting, "disorderly" landscape for both postsecondary education and the world of work, as described in the Part A reports, it is vital that students develop their Wayfinding Abilities as an explicit and integral part of their broader, agency-infused competency goal-line. Wayfinding must be owned by the individual, particularly as none us of can any longer predict how they will "**learn, earn, and care**." However, educators can and should do their utmost to increase the variety and richness of experiences likely to provide "clues" for students, provide proactive and evolving tools for them to use, and support and mentor them in the process of developing the five competencies included in this domain.
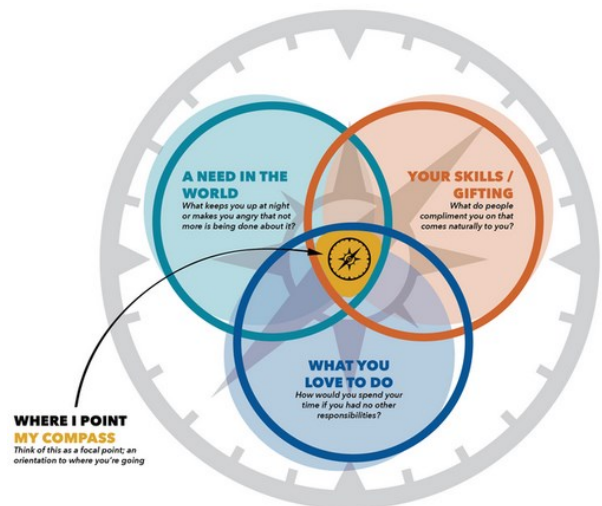
Cook-Deegan created an approach to help students design their future directions, called Project Wayfinder. See more on Project Wayfinder in several of the primers at the end of this report.

Why Wayfinding Abilities are so important

In Report 2 we quoted Reid Hoffman and Ben Casnocha from their book, *The Start-Up of You*, to describe the world young people encounter today:

> The conditions in which entrepreneurs start and grow companies are the conditions we *all* now live in when fashioning a career. You never know what's going to happen next. Information is limited. Resources are tight. Competition is fierce. The world is changing. And the amount of time you spend at any one job is shrinking. This means you need to be adapting all the time.[3]

"***More is on you***," as Tom Friedman says,[4] and the more informed and prepared young people are, the better they will adapt and navigate through the uncertainty, identify opportunities, and build their future. This is true in the work world and in postsecondary education, but it is equally true in life transitions of all kinds: becoming comfortable in the new sociocultural worlds described in Report 4, overcoming childhood trauma as described in Report 5, or exploring one's first adult relationships. Best to have navigational competencies to call upon. Students might ask:

> **Do I have the focus, thinking tools, help-seeking orientation, and tolerance for ambiguity** to dissect an unfamiliar world (like the work/learn landscape), envision opportunities for myself within it, and work systematically in pursuit of those opportunities?

> **Have I the insight, ingenuity, and initiative** to spot workplace needs and opportunities, and work with others toward creating solutions and value for myself and others?

> **Have I the relationship and network orientation** to make connections, give and receive support, and secure needed help and resources?

> **Can I apply all these same abilities** to finding ways to improve the groups and communities of which I'm a part?

Traditionally, wayfinding refers to "the techniques used by travelers over land and sea to find relatively unmarked and often mislabeled routes."[5] In formulating the contemporary Wayfinding Abilities in the MyWays Student Success Framework, we drew on practice from the three fields mentioned above: school-based college and career counseling, design-based life and career development, and entrepreneurship.

The school-based college and career counseling perspective on Wayfinding

Advisors and career counselors have been fighting for years, rightly in our view, to get schools to carve out the time and resources to help learners explore career options and choose and follow a path. All manner of books, knowledge bases, and online tools are now available to aid in finding one's calling, a field of study, a college or certificate program, or a job or gig. While this important battle is still being fought, the age of accelerations and complexity snuck up from behind, and is, in some ways, overtaking this effort.

The design-based career and life development perspective on Wayfinding

We now need to shift from helping students find and follow a defined path to helping them navigate multiple options in a broader landscape; from helping them target one end goal to helping them learn how to excel at transitions; from making sure they get information to making sure they know how to drive the search themselves. Two books illustrate the importance of these new approaches. *The Start-Up of You* by Hoffman and Casnocha carries one mantra throughout: you, as a learner, worker, and person, are in "permanent beta" — constantly improving and adapting. Hoffman is the cofounder of LinkedIn, so it is not surprising that the authors focus heavily on the importance of networking and social capital.

By the time *The Start-up of You* was published in 2012, Stanford undergrads were already flocking to a recently developed course called "Designing Your Life," making it the most popular offering at the university. Created by the executive director of Stanford's design program and a designer responsible for Apple's first mouse and Electronic Arts, the course applies the process of design thinking to the "wicked problem" (any complex, quickly changing challenge) of designing your way toward your own career and life. The authors have recently published a book of the same name based on the course, focusing on design thinking elements including ideation, prototyping, reframing, bias to action, and radical collaboration (all of which are reflected in the Wayfinding Abilities domain).

The entrepreneurship perspective on Wayfinding

Perhaps no occupation operates as perpetually in uncertainty as the entrepreneur. In fact, researchers have found that entrepreneurs exhibit a high tolerance for ambiguity.[6] A 2003 landmark study of successful entrepreneurs by Amir Bhidé focused on how people are able to successfully pursue opportunity despite limited means and uncertain conditions.[7] Rather than planning, foresight, or deal-making, Bhidé's entrepreneurs started small with whatever means and assets were at their disposal, learned the market by being in it (not studying from the outside), and practicing "opportunistic adaptation" to tweak and expand their businesses as their involvement in an industry niche revealed new opportunities. As in *The Start-Up of You*, these entrepreneurs saw themselves and their businesses in "permanent beta" — intent on continuous improvement and forsaking rigidly set plans.[8]

A major challenge is that, while students' choices coming out of secondary school have become increasingly complex, our school-to-life system lacks "acceleration lanes" — to use the highway system analogy in Report 5, *Preparing Apprentice-Adults for Life after High School* — where students can practice and hone these skills. Instead, developing students' age-appropriate Wayfinding Abilities as they progress through their K-12 years and their "year 13" transition into the work/learn landscape gives students long, well-designed on-ramps to adult life. Such on-ramps let students increasingly take control of their own journey and develop the direction and confidence to survive and thrive in the adult world. This is especially crucial for low-income students and students of color for whom means are most limited and skills for transcending current circumstance are most important.

An overview of Wayfinding Abilities competencies

The five MyWays Wayfinding Abilities competencies draw on knowledge, skills, habits, and behaviors that help students navigate their own life decisions. As such, these five competencies are even less distinct from each other than those in the other four domains; Wayfinding is essentially a process — *a navigation process*. Like most things in life, the reality is much messier than the model. The process steps are often intertwined or can be taken out of sequence, and the wayfinder often needs to spiral back after trying some steps, creating an iterating cycle with multiple entry points. Further, the competencies involved in Wayfinding are applicable not only to academic or career decisions (although this is our focus), but also to decisions relating to relationships, personal goals, and other parts of life, and the process continues into and throughout adulthood. Regardless of how learners navigate the path, they must develop competency in each Wayfinding step:

Survey the Learn, Work, & Life Landscapes

The ability to research and understand information, resources, external barriers, and internal factors relevant to upcoming transitions in school, career, and life.

Addressing this competency includes helping students to: research and gain real-world exposure to the rapidly evolving career and life options; identify the knowledge and skills associated with the careers or challenges that match their strengths and interests; explore traditional and emerging postsecondary education, career, and hybrid work/learn options; and identify potential barriers that may require additional support or resources.

Identify Opportunities & Set Goals

The self-awareness, focus, and strategic thinking needed to cultivate individual strengths, identify and pilot opportunities, and set personal goals for learning, work, and life.

Addressing this competency includes helping students to: develop self-knowledge, through self-directed, authentic learning activities, as well as to access tools to diagnose strengths, interests, and personality traits; identify learning, work, and life opportunities likely to match these abilities by focusing on the intersection of assets, aspirations, and market realities; and create goals that point in a longer-term direction, but include interim steps.

Design & Iterate Prototype Experiences

The ability to translate goals into prototype experiences for each new stage or transition, especially the transition from high schooler to independent, contributing adult.

Addressing this competency includes helping students to: translate goals into action plans for each new stage or transition; iterate and refine the plans through action — starting with "junior versions" or "prototypes" of work, learn, or civic activities; and move to the next loop of the plan, adapting it based on feedback and lessons learned from the first loop.

Find Needed Help & Resources

The ability to identify, locate, and secure the time, money, materials, organizations, mentors, and partners needed to support their plans.

Addressing this competency includes helping students to: identify what resources they need; develop the help-seeking mindset and skills to successfully secure them; build the social capital needed to support all steps in the Wayfinding process, including mentors, role models, weak tie contacts, and strong family and friend supports; and deploy these relationships into a professional network that enables them to tap insights, find better opportunities, and make better career decisions.

Navigate Each Stage of the Journey

The ability to implement plans in the worlds of education, work, and life, making mid-course adjustments as required based on new experience.

Addressing this competency includes helping students to: grow personal traits related to adaptability and flexibility; develop and practice more specific skills related to pivoting, reframing, and changing direction; strengthen their ability to accurately appraise and take on risk as they pursue professional opportunities; and develop the skills necessary to navigate systems while dealing with discrimination or other challenges.

For expanded descriptions of each competency, see the primers at the end of this report.

The Wayfinding process also requires learners to call on all of their competencies and assets so that they can be effective in a way that is unique to their own profile and interests. In this sense, Wayfinding is where MyWays focuses most clearly on the *agency* aspect of competency; this "deep and durable self, acting to shape one's development and environment" becomes perhaps more important here than in any other domain. The research on agency, developmental tasks, and the increasing complexity of society and the economy suggests that, as learners navigate into the postsecondary work/learn landscape — and "make their best way forward" through the rest of their lives — they must be able to do the following:

- **Navigate transitions.** Developmental transitions have always been part of students' lives, but with the influence of major disruptors, such as artificial intelligence, reshaping the "lives and livelihoods" of young people over the next 20 years, navigating transitions will be a continuous challenge (for more on this, see Tom Vander Ark's blog on artificial intelligence).

- **Learn from failure.** Without set paths and traditional templates for career progression, and with ever-increasing choices, students will "fail forward" more often — that is, they will learn and progress not only along straight paths, but also through pivots, reframing, and new directions (all process skills emphasized in design thinking).

- **Build social capital.** Perhaps one of the most critical things for our students to learn is how to build social capital, creating formal and informal networks to provide information and other resources, opportunities, and more. For more, see Report 4, *5 Essentials in Building Social Capital*.

Students, especially as they move through high school, know that transition is looming and will respond to opportunities to address their progress as apprentice-adults. The students in the Da Vinci Schools Extension (DV-X) have adopted the new term "adulting" to describe what this process is all about. DV-X

started offering a high-school level version of Stanford's "Designing Your Life" course, buttressed with practical things student need to know while they transition, like managing their own finances. "We started out calling it our Grit Course," explains director Kim Merritt, "but midway through, the students all started referring to it as 'Adulting Class.' It's where they go to learn all about adulting.

Wayfinding Abilities Competency Primers

For more on each of these competencies, be sure to see the one-page primers at the end of this report. We have included a primer for each of the five competencies. As indicated in the sample provided here, these primers briefly cover:

- what the competency covers;
- where to look for guidance on addressing the competency; and
- additional resources.

The primers are intended to provide a brief introduction to the most important aspects of each competency. They offer only a taste of the research and activity in each area, but we've tried to ensure that they include many key issues and resources. We hope that our MyWays Community of Practice and other educators will help add to and update these resources over time.

In Wayfinding Abilities, as mentioned above, the five competencies are also part of an iterative and overlapping process. In particular the first, second, and third competencies are highly integrated. If you are interested in any one of these competencies, you should look at all three primers, as you may find ideas or resources of interest in all three of them.

Sample competency primer (See primers starting on page 23.)

The place where more fluid Wayfinding suited to the rapidly changing work/learn landscape of the future comes to the fore is in the third of these competencies, Design & Iterate Prototype Experiences. As Burnett and Evans explain it in *Designing Your Life*:

> Prototypes "design an experience that allows you to 'try out' some version of a potentially interesting future... help build a community of folks who are interested in your journey... [and] frequently turn into unexpected opportunities – they help serendipity happen. Finally, prototypes allow you to try and fail rapidly without overinvesting in a path before you have any data."[9]

Existing competency frameworks do not include much on this design angle, but several of them feature related elements like personal fit, social capital, learner agency, and self-management.

Emerging Ideas on Wayfinding Abilities

While the vast majority of full goal-line competency frameworks do not explicitly include Wayfinding skills, those that do align well with the MyWays domain.

The "Go" key in the **Educational Policy Improvement Center (EPIC)'s** Four Keys (Think, Know, Act, Go) is consonant with Wayfinding Abilities, though it is organized by the issues involved in preparing for further education and career decisions rather than by the stages of the iterative Wayfinding process:

- Contextual issues
- Procedural issues
- Financial issues
- Cultural issues
- Personal issues

In **ConnectEd's** College and Career Readiness Framework, the "Educational, Career, and Civic Engagement" category provides the closest match to Wayfinding Abilities. This category encompasses "the practical skills needed to navigate college campuses, workplaces, and civic institutions and to manage one's future educational and career development and engagement with democratic processes." Like MyWays, ConnectEd also highlights the fact that access to information and mentor relationships are necessary to provide the social capital that makes "the difference between success and failure," particularly for those who are the first in their families to go to college, vote, or embark on a career in the US.

The Pathways to Prosperity Project from Harvard University and Jobs for the Future also offers a useful framework (see to the right, and on page 13 of *Creating Pathways to Prosperity: A Blueprint for Action*).

Their process-oriented framework maps closely to the Wayfinding Abilities competencies, with the first five elements of career readiness corresponding to the first two Wayfinding Abilities, and the last four incorporating elements of the three additional Wayfinding Abilities.

Options	• They are aware of multiple career options and have identified a few priority careers *of interest.*
Requirements	• They understand the skill and training requirements associated with each major career of interest.
Personal fit	• They understand how personal skills and talents align with each career of interest.
Where to learn/train	• They know which businesses, colleges, or other organizations supply post-secondary education and training related to their interests.
Where to work	• They know of organizations or businesses where people in these careers work.
On-track status	• They are on track with regard to having the skills necessarily for taking the next steps along the pathways associated with careers of interest.
Plans	• They have career development plans that cover at least the next few years.
Actions	• They are taking the necessary and appropriate steps to execute those plans.
Role models	• They have access to people who can advise them regarding careers of interest, ideally including people who are actually in those careers.

International efforts to define next generation competencies also offer some interesting parallels. Careers New Zealand's educational benchmark documents cover a set of four "Student Career Management Competencies" (in the red boxes) that in fact deal with Wayfinding Abilities across a much broader set of goals than the title implies. (The organization defines career as "the sequence and variety of work roles, paid, and unpaid, that a person undertakes throughout a lifetime. More broadly, 'career' embraces life roles in the home and the community, leisure activities, learning and work. Work, learning and life, though sometimes distinct, are closely intertwined. Everyone has a career.")
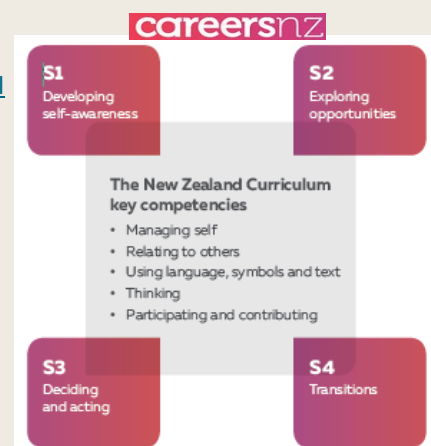
The concept of transitions is central to this set of competencies, as are the ideas of "social capital" and students "self-managing their life, learning, and work." As the diagram shows, the four Student Career Management Competencies map well to our five Wayfinding competencies. Further, applying the Key Competencies to the Career Management process mirrors the application of the other MyWays competencies in the pursuit of Wayfinding.

For more emerging ideas in Wayfinding competencies, see the Relevant Competency Frameworks resource box near the end of this report.

Key principles for addressing Wayfinding

Instead of cocooning students in an increasingly structured environment during their school years and then releasing them into an ever-more disorderly postsecondary and adult world, we need to provide students with opportunities to work explicitly on developing Wayfinding Abilities during their school years. These opportunities should give them increasing freedom to drive their own learning and decision-making as they progress. Even students adept at applying problem-solving, persistence, or learning strategies to academic or service work are often stymied when it comes to harnessing these same skills to develop their own life path — especially if they have not had the opportunity to try it out along the way.

Of all the domains, Wayfinding Abilities is the least likely to be addressed in today's schools, even by the leading deeper learning models that work with all three other domains. Still, the underlying research, a few pioneering school models, and lessons from youth development offer clues to work with, suggesting that efforts to support students' Wayfinding development should incorporate **four key principles, helping students to:**

1. **Start early**, so that building awareness of one's own profile and interests, and of the world outside school walls, informs learning choices and enhances relevance and motivation.

2. **Harness the Wider Learning Ecosystem** to engage with the adult world and give learners access to opportunities for developing Wayfinding Abilities.

3. **Access the kind of support necessary** to enable real progress in Wayfinding Abilities.

4. **Address the barriers to equity** inherent in competencies that are built on relationship-based supports and community-based lines of sight to college, career, and life outcomes.

Many next generation educators who affirm the growing importance of Wayfinding Abilities are still exploring these principles and learning how to design for them. To further these efforts, we now explore each principle in more detail.

KEY PRINCIPLE 1: **Start early, so that building awareness of one's own profile and interests, and of the world outside school walls, informs learning choices and enhances relevance and motivation.**

One of the lessons that those who pay attention to Wayfinding Abilities note is the need to start building the muscles necessary for bold wayfinding long before the junior year of high school. From fourth or fifth grade — or even younger — educators can help students begin to develop the understanding of self, interests, and strengths that lies behind many of the Wayfinding Abilities. Developing competencies from other MyWays domains, such as Positive Mindsets, Self-Direction, Critical Thinking, and Entrepreneurship, will also contribute to successful Wayfinding Abilities.

Further, learners should take part in career awareness and exploration experiences as developmentally appropriate (typically, in later elementary and middle school) and in career preparation and training during high school. For more on this progression, see ConnectEd's work-based learning continuum, which stretches from kindergarten through adulthood, in the Design & Iterate Prototype Experiences primer.

As the nature of future "careers" becomes less predictable and work becomes more project- and problem-based, we can also increase engagement and start kids thinking about their futures in a different way. Jaime Casap, raised by a single mom on welfare in Hell's Kitchen, New York, and now Global Evangelist at Google, Inc., has thought a lot about how education can change lives for individuals and families. He notes, "Don't ask a student what she wants to be when she grows up. Ask her what problem she wants to solve." Students who are encouraged at an early age to begin to identify and tackle authentic problems in their own communities (or even on a global scale — see the UN's #GlobalGoals in this blog on Cause + Code) also begin early to identify the skills they need to understand and solve problems. This is mostly likely to take place through inquiry-based, project-based, or place-based learning — all approaches that involve reaching beyond school walls to a wider ecosystem. For more on Whole Learning in the Wider Learning Ecosystem, see Report 11.

> *"Don't ask a student what she wants to be when she grows up. Ask her what problem she wants to solve."*
>
> —Jaime Casap

Visions of the Possible

Generation Schools

Start early ✔

Harness the Wider Learning Ecosystem (see next key principle) ✔

Next Generation Learning Challenges grantee Generation Schools Network addresses its mission — **Preparing Every Child for Life's Responsibilities, Challenges, and Opportunities** — by deeply embedding these two Wayfinding imperatives and much more in its model for K-12 schools.

KEY INNOVATION LINKS LEARNING TO LIFE
280 hours of college and career guidance

To create "visions of the possible," Generation Schools Network increases learning time to incorporate a unique and robust college and career readiness program. For two months each school year, students transition from a typical course sequence to a full time "Intensive," during which they explore an academic connection to high-growth industries and careers and cultivate personal and professional competencies in the classroom, in workplaces, on college campuses, and at other community locations. In grades 6–9, intensives are exploratory and horizon-expanding. In grades 10–12, they often take the form of internships, jobs, and postsecondary application activity.

Generation Schools Network continues to develop its college and career readiness offerings, which include the following:

- Career Exploration Units
- College and Career Readiness Lessons
- Peak Readiness Events:
  - Workplace visits
  - Job shadows and internships
  - Mock interviews and networking
- Business and industry partnerships
- Business ethics certification
- Career pathway development

See this *College & Career* brochure for their latest developments.

For other examples of career and life planning curricula differentiated by grade level or age groupings, see the following: Career Guidance Washington's year by year curriculum for grades 6 through 12, covering eight themes important to a college- and career-ready student; and South Carolina's Personal Pathway to Success career planning system, which spans pre-K through grade 20. During the elementary years, Pathways to Success emphasizes broad career awareness. In middle school, students identify a "high interest" career or sector and develop a flexible individual education plan with parents and the counselor, which forms the basis for ongoing progress monitoring and revision through middle and high school years. As sophomores, students identify a career major, and develop an individual post-graduation plan — for additional education or direct transition into the workforce. Counselors encourage high school

students to participate in internships and other forms of work-based learning. "We've tried to transfer ownership of the pathway from the counselor to the student. …Traditionally, the counselor has owned the decision, but we're trying to put students in the driver's seat."[10]

KEY PRINCIPLE 2: **Harness the Wider Learning Ecosystem to engage with the adult world and give learners access to opportunities to develop Wayfinding Abilities.**

Wayfinding Abilities, more than any other domain, relies heavily on harnessing a learning ecosystem that includes the family, one's school or work (depending on where one spends the majority of their hours), and what some call "third places," the other community spaces where people gather, interact, and often learn.[11] While developing Wayfinding Abilities can happen anywhere, MyWays summarizes the most likely real world learning opportunities into what we call the Wider Learning Ecosystem (WLE): *the broad expanse of opportunities beyond classroom learning that can enrich collective and individual learning as well as student agency – an ecosystem that is ever expanding and changing, with a spectrum from formal to informal prospects, accessed through a wide range of settings, media, and players.*
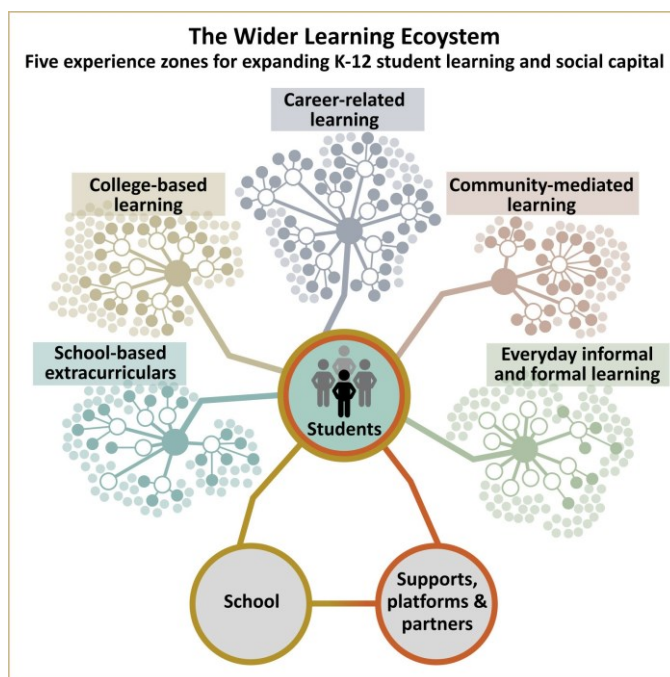
The WLE includes five experience zones, seen in the graphic to the right, accompanied by a support infrastructure that enables learners to access, engage with, and get the most out of the learning, growing, and networking available across these zones. (See the Report 11 section on Wider Learning Ecosystem for more information. We will also be publishing a separate resource on this topic, funded by the Barr Foundation; the forthcoming resource will be available on the MyWays website.)

While WLE learning has distinct advantages for each of the MyWays competency domains, for Wayfinding Abilities getting out into the adult world provides, among other advantages, what Educurious calls "lines of sight" to future lives, information on pathways, and experiences that encourage learners to evaluate their own strengths and try out their interests. In his excellent paper, *It Takes a Whole Society: Opening up the Learning Landscape in the High School Years,* Robert Halpern points out that "with exceptions, high schools fail to treat vocation, work, and discovering and guiding interests and planning for the future as important curricular issues in and of themselves."[12] We need to find more and better ways not only to weave explicit discussion of work, careers, civic challenges, and life choices into day-to-day learning experiences, but

also to provide opportunities for real-world exposure and experiences to "try out" work, specific occupations, community service, and adult roles. Clearly career-related real-world learning experiences provide one valuable route to building Wayfinding competencies, but community-mediated, extra-curricular, and every day formal and informal learning can all help learners find and develop strengths and personal identity, iterate prototype futures, and connect with resources, mentors, and other social capital.

Developing Wayfinding Abilities through Real-World Experiences

Jackson[i] strongly disliked English class, but truly enjoyed working with his hands. Fortunately, he lives in Vermont, which in 2013 passed Act 77, creating flexible pathways to graduation, higher education, and meaningful careers. Among other pathways, work-based experiences are encouraged, as one way to help learners "customize their education to meet their unique needs and circumstances, and gain real-world knowledge, skills, and experiences."[13]

At Whitcomb High School in Bethel, students manage their goals and real-world experiences through SchoolHack's LiFT platform. Through this, Jackson had access to a Department of Labor career database and other resources (see below) to survey the work and prospects in the various building trades. (Wayfinding Ability #1: Survey the Learn, Work, & Life Landscapes.)
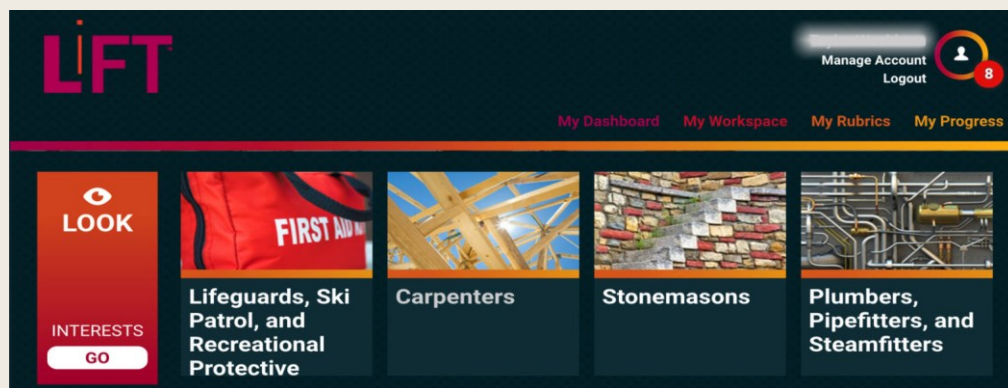
As a junior, Jackson spent his afternoons working as an intern with a local construction company, systematically exploring the building trades to get a taste of what it is like to be a carpenter, an electrician and a plumber. (Wayfinding Ability #3: Design & Iterate Prototype Experiences.) By the end of junior year, Jackson had discovered a passion for plumbing and decided to pursue a formal apprenticeship. (Wayfinding Ability #2: Identify Opportunities & Set Goals.)

Senior year, Jackson designed a capstone project around his passion for plumbing. He alternated days on the job with days in school working on his capstone project, which involved extensive planning, locating and securing the resources to implement the capstone while pursuing the apprenticeship, and ensuring that he got the necessary graduation credits, as enabled by the Vermont flexible pathways policy. The LiFT screenshot below illustrates the kind of processes Jackson managed and the way in which the platform enables students to take ownership of their own path. (Wayfinding Ability #4: Find Needed Help

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[i] This is a real student story; Jackson is a pseudonym.

& Resources; Wayfinding Ability #5: Navigate Each Stage of the Journey.) While the platform includes many more features, the screen shot illustrates a dashboard for tasks related to goal development and internship deliverables.
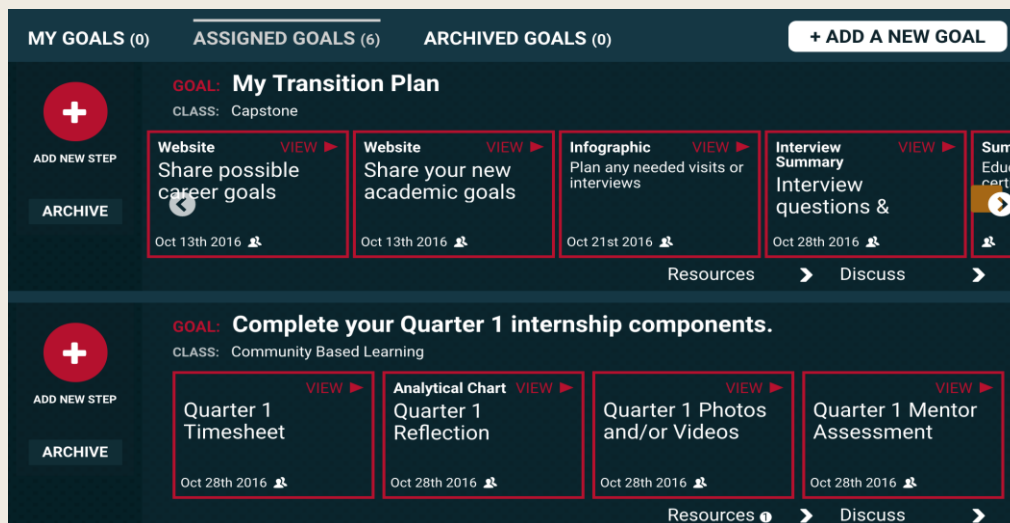
With so much of his academic credit embedded in real-world experiences aligned to his personal aspirations, Jackson began to truly enjoy school and actively engaged in his learning. His teacher Lindy Stetson describes the kind of remarkable shift often seen when learners have the opportunity for interest-driven learning in the field: "I saw a true 'gear change' when Jackson was able to write and read about his passion of plumbing. He used to have a passionate dislike of English class, but now there was no more prodding needed to get his English work done. He was able to complete things on his own, and produced an extremely strong research paper. He had been a shy student and disliked public speaking. But at his capstone exhibit he kept community members engaged. He even presented to younger students about his apprenticeship, internship, and senior project."

Clearly the opportunity for Jackson to harness the Wider Learning Ecosystem enabled him to make significant progress with traditional Content Knowledge like English, Creative Know How competencies such as communication, and Habits of Success such as self-direction. At the same time, his experiences outside the school walls, as well as the guidance and support infrastructure the school provided around those experiences (including check-ins, job site visits, and personal support for Jackson to identify and reflect on the academic understanding he gained from his work experiences), provided him with authentic and meaningful opportunities to develop the kind of Wayfinding Abilities that all students will need in today's complex and changing world.

By the end of senior year, Jackson had even earned scholarships to pay for the remaining years of his apprenticeship program to become a journeyman. We mentioned near the start of this report that, "together, the Wayfinding Abilities comprise a flexible toolkit for managing short- and long-term transitions in one's life, developing the skills to navigate the work/learn landscape, and initiating a work path or a business." Whether the plumbing trade encounters the kind of rapid change predicted for other occupations or not, Jackson's experience in developing the skills to navigate a path for himself will stand him in good stead. It is difficult to imagine him being able to get some of the benefits involved (including the social capital and introduction to an authentic community of practice) had he not been empowered to step outside the school walls.[14]

KEY PRINCIPLE 3: **Access the kind of support necessary to enable real progress in Wayfinding Abilities.**

As with all other MyWays competencies, the support needed to enable progress on Wayfinding Abilities is both "more than" and "different from" traditional learning support. Unlike old-style guidance activities, which often provided information on a limited range of postsecondary educational options based on students' rapidly chosen "interests," support for Wayfinding is more about helping learners understand themselves, explore the world and their interests in it, and develop the competencies to set goals, develop plans, find the help and information they need, make decisions, and evaluate as they go.

Again, as with the other MyWays competencies, this means providing not "information" or "classes," but rather supports for learners to experience the real world; scaffolding for them to make choices, try options, fail, change course, and move forward; and access to mentors and coaches. The supports listed in Getting Smart's *Core & More* (see box) are an excellent step in that direction.

Ten Supports Students Should Expect from School

Tom Vander Ark and Mary Ryerse, in their report, *Core & More: Guiding and Personalizing College & Career Readiness*, list 10 guidance functions that are "important enough to warrant dedicated time every day, ongoing staff development, strong coordination, an adopted curriculum and personalization tools."

As the list illustrates, these supports range from relationships to choices and information and the opportunity to actively pursue interests.

The report also highlights that the most promising student advisory systems are blended (combining advisor and mentor interactions with online tools), as well as both explicitly scheduled and distributed (embedding guidance goals into all educators' work and all students' learning experiences).
It also provides links to resources for all of these next generation guidance elements.

ENVIRONMENT. Be known, respected, and safe at school.

ADVOCATE. Have an advocate who knows the student's goals and aspirations.and helps to navigate school.

OPTIONS. Have the choice of several relevant, rigorous courses of study to align goals and academic decisions.

ACADEMIC SUPPORT. Receive the time and attention needed for any subject at any time.

CAREER AWARENESS. Have the opportunity to learn about the range of career options and experience a wide range of work settings.

POSTSECONDARY DECISION SUPPORT. Be provided guidance that results in the best possible choice of post secondary learning opportunities.

PREP & AID. Be prepared for entrance exams and supported in application for financial aid.

SUPPORT SERVICES. Feel supported by a web of youth and family services.

MENTORS AND ROLE MODELS. Have the opportunity to be around adults they can imagine themselves becoming.

FULL EXPRESSION. Participate in the arts and extracurricular activities, use current technologies, and serve the community.

KEY PRINCIPLE 4: **Address the barriers to equity inherent in competencies that are built on relationship-based supports and community-based lines-of-sight to college, career, and life outcomes.**

As the preface to *Creating Pathways to Prosperity: A Blueprint for Action* explains:

> The U.S. school-to-career system is highly developed in some ways and underdeveloped in others. Well-developed pathways function like pristine interstate highways for our most academically skilled children from relatively wealthy communities and households. They move smoothly from kindergarten through elementary, middle, and high school on to four-year colleges from which they graduate into careers. Conversely, students possessing fewer academic skills (no matter what their family backgrounds) or growing up in less well-to-do families and communities, often face narrow and poorly maintained pathways full of potholes, detours, and missing road signs.[15]

In the Wayfinding Abilities domain, perhaps more than anywhere else, the pathways forward can be hard to discern and even harder to access. To develop and practice Wayfinding Abilities, learners need to connect with Wider Learning Ecosystems that often depend on opportunities available through the local community or family-provided enrichment activities. While even (and sometimes especially) high poverty communities contain significant funds of knowledge and human assets, the mechanisms to connect students to them may be less developed, or the financial resources to support learners in working with them may be absent. On the enrichment side, David Brooks, in his editorial on opportunity gaps, quotes data from Robert Putnam showing that low-income families spend an average of $480 per year on enrichment opportunities for their children, compared to $5,300 for middle- and upper-income families — creating a significant experience gap.

Because Wayfinding competencies will be critically important to the lives our students will lead, we must find ways to ensure that all students have equitable access to the adult world, community assets, and mentors.

Because Wayfinding competencies will be critically important to the lives our students will lead, we must find ways to ensure that all students have equitable access to the adult world, community assets, and mentors. In particular, practitioners need to plan proactively to ensure equitable access to the kind of experiences required for disadvantaged students to access "visions of the possible" or "lines of sight" to careers and productive lives, as well as to enable the development of social capital that other students source more readily from their families, communities, and privileged out-of-school activities and opportunities. The following box highlights the kinds of programs that are being developed to address this reality.

Wayfinding on Challenging Pathways

A range of programs has been developed to assist youth of low income, color, disabilities and other challenges in navigating to successful futures. These efforts include several created or evaluated by MCRC, a leading research organization that designs and studies programs intended to increase the economic and personal well-being of low-income families:

Making It Happen
ConnectEd is the force behind California's Linked Learning high schools, which combine rigorous academics, high quality career-technical education, work-based learning, and comprehensive support services in industry-themed pathways. As connected as such schools are to the real world, ConnectEd realized even they were struggling to make college and especially career exploration a central part of all students' experience. ConnectEd worked with MDRC to create the Exploring College, Career, and Community Options (ECCCO) curriculum for career academies and pathway high schools including, on the career side, career exploration visits and increased school capacity to develop high quality internships. See more on this 10th to 12th grade program in this overview video (5m), and evaluation report.

Make Me a Match
The College Match program is aimed at helping low-income and first generation college-ready students who are "undermatching." (See the section on undermatching in Report 3, *5 Decisions in the Work/Learn Landscape*.) As this video (5m) explains, a number of light touch informational interventions targeting the top 15% of test-takers appears effective at getting these students to attend selective colleges.

A Year to Make a Difference
Year Up's mission is to close the "opportunity divide" by providing urban young adults with the skills, experience, and support that will empower them to reach their potential through professional careers and higher education. It combines hands-on skill development, courses eligible for college credit, and workplace internships to prepare students for success.

The state of play in Wayfinding Abilities

As we noted earlier, Wayfinding is missing or underrepresented in the comprehensive competency frameworks we studied. However, a few frameworks and school models make these competencies a major part of their learning design (for more, see the Quick Resource Dive below). Further, a large and growing number of individual initiatives, projects, online tools, and apps address Wayfinding needs, as described in the competency primers.

Across the four MyWays domains, the extent of consensus on the competencies included, the evidence for learning/instructional strategies, and the maturity level of assessment options varies — in some cases substantially. Here, we offer a few notes to inform your thinking and prompt further investigation as you design learning experiences to address the Wayfinding Abilities domain.

The state of competency definition and learning strategies

Summary: The role of schools in guiding student development in the full range of Wayfinding Abilities is far from universally accepted. Even school models that accept the importance of the Wayfinding competencies typically feel that addressing the other three MyWays domains is challenging enough, and they have yet to fully address Wayfinding. In other cases, the focus on self-management of life pathways is strongly biased toward college, leaving career and life goals aside.

- **The research base** for Wayfinding competencies is uneven. Programs like the College Spark Washington College Readiness Initiative undergo rigorous evaluation. Other process elements, such as Find Needed Help & Resources, are less studied, though aspects of this competency, such as the building of social capital, attract more attention (see Report 4). David Conley's Four Keys to college and career readiness model — including his "Go" key, which corresponds to the Wayfinding Abilities domain — incorporate more than a decade of research on what it takes for students to succeed in college and career. The research base in ConnectEd's proposed College and Career Framework draws on this and expands it to include the navigation of civic life.

- **Learning opportunities and strategies** provide the acceleration lanes that learners need to develop Wayfinding Abilities prior to merging onto the highway of postsecondary life. However, such opportunities and strategies are currently hit or miss at best. Most high schools offer traditional — and usually chronically under-resourced — forms of "college guidance." Few offer real windows on careers and other aspects of adult life, or provide the kinds of self-directed learning opportunities, real-world connections, adult mentors, and other elements of active, iterative learning necessary for students to develop and practice their Wayfinding Abilities. Promising practices include integrated advisory structures, personalized learning approaches, and learning platforms that incorporate self-assessments and information on college, career, and life choices.

The state of assessment

Summary: Wayfinding competencies are often unaddressed; even when they are addressed, they go largely unmeasured. To deal with this, Wayfinding innovators are turning to badging (often internally) and/or tracking and evaluating student learning experiences to help ensure that students have opportunities that are likely to help develop agency and self-direction.

Next generation suggestions for Wayfinding assessment include:

- Start by tracking the extent to which you are providing learners with the needed experiences (for more, see the "Visions of the Possible" box above).

- Where outcomes cannot be measured, step back in the evaluation logic model from looking at outcomes to thinking deeply about inputs. Implement quality reviews of educator capacity and Wayfinding curriculum, as well as quality standards, criteria, or guidelines for service learning (NY Youth Leadership Council), career awareness experiences (Linked Learning), or internships (National Academy Foundation).

- Use standards-driven badging (such as Boston Afterschool and Beyond digital badges or Open Badges) where applicable, and use participation-driven badging for more informal learning.

- Create school-based badging systems and/or incorporate external micro-credentials that include not just metrics for participation but also student preparation for and reflection on their experiences. For example, you might award students a badge not for simply visiting three

colleges, but for reflecting on how each of the colleges matched up to (or altered) the four factors they had chosen ahead of time to look for in a college.

Ongoing challenges in the assessment of Wayfinding Abilities include: carving out time in schedules to include and assess Wayfinding competencies; providing the types of student experience around Wayfinding that truly enable student agency; and creating the necessary relationships to fully involve external partners, such as families, community organizations, employers, and postsecondary institutions.

For more on Wayfinding Abilities assessments, see the Wayfinding Abilities one-page competency primers at the end of this report; Report 12, *Assessment for Broader, Deeper Learning* (especially the sections on the Badges & Micro-credentials strategy, and Quality Reviews strategy); and two recent reports: the Center for Curriculum Redesign's *Evolving Assessments for a 21st Century Education* and the National Academies Division on Behavioral and Social Sciences and Education's *Supporting Students' College Success: The Role of Assessing Intrapersonal and Interpersonal Competencies*.

A quick dive into Wayfinding Abilities resources

Because the purpose of the MyWays Student Success Framework is to provide a rosetta stone for thinking about the broader, deeper, future-ready goals for today's learners, we have focused on describing that goal-line in conceptual terms. We also believe deeply that school designers, educators, and learners need to invest in constructing and evolving their own competency goal-lines within the broader framework.

In doing this work, educators may find helpful the resources on the following pages: starter resources; relevant competency frameworks for Wayfinding Abilities; and school and program models with strong emphasis on Wayfinding Abilities.

Starter Resources for Wayfinding Abilities

Good introductions to this rapidly developing domain:

- Getting Smart and the Huffington Post, *GenDIY series.* #GenDIY is an effort designed to help young adults make sense of education opportunities and career pathways that have become complicated and competitive. The site curates stories to get inspired, stories to get started, and resources to build your own GenDIY playlist.

- Getting Smart, *Core and More: Guiding and Personalizing College and Career Readiness*

Influential resources on multiple pathways and out-of-school learning:

- Jobs for the Future and Harvard Graduate School of Education, *Pathways to Prosperity* and *Creating Pathways to Prosperity: A Blueprint for Action.* Two seminal reports that focus on the need for multiple pathways, and the need for cultural and institutional shifts to ensure a full range of school-to-career options.

- Big Picture Learning, *Leaving to Learn: How Out-of-School Learning Increases Student Engagement and Reduces Dropout Rates.* A playbook from one of the school network leaders in engaging learners by focusing on developing Wayfinding Abilities within the Wider Learning Ecosystem.

Continues on the next page >

Student Wayfinding tools:

- *Career Guidance Washington* — a model program for student postsecondary planning, including student resources, as well as personalized pathways planning tools, thirty lessons for grades 6–12, curriculum maps, and a handbook on Navigating College and Career Readiness for All Students.

- *Designing Your Life: How to Build a Well-Lived,* Joyful *Life* — a book based on the popular Stanford University course by Bill Burnett and Dave Evans. See also this Designing Your Life video (3m), which offers an excellent, succinct introduction to the Stanford design-thinking approach to thinking about and planning your future.

- Roadtrip Nation helps career-seekers connect to real-world professionals and discover pathways aligned with their interests. Resources include the *Roadmap* tool*,* the *Interview Archive* (a career video database with thousands of interviews), *The Roadtrip Nation Experience,* a 12 lesson plan curriculum, and a *PBS TV series* in its thirteenth season. For an introduction to what it's all about, dip into this 25m video.

- The Educurious Career Connection — covers six core experiences (mentoring, job shadows, internships, informational interviews, work-based problems, and networking).

- Electronic platforms for success planning, such as MyBestBets, Naviance, and the Blackboard Planner by MyEdu and JobGenie (incorporating resources from Roadtrip Nation and Burning Glass).

- XQ SuperSchools has two new, free resources: Sokanu ("So Can You") is a career assessment tool to help students learn more about themselves and careers they might enjoy based on personality and interests. XQ College Pathfinder offers five workbooks for the journey from high school to college.

Relevant Competency Frameworks

Competency frameworks that emphasize this domain include the following (the first three are featured in the MyWays alignment matrix in the *Introduction and Overview of the MyWays Student Success Series*):

- EPIC's Four Keys to College and Career Readiness — the "Go" key is consonant with Wayfinding, but separates college awareness and action steps from career awareness and action steps, rather than following the stages of an integrated wayfinding process.

- ConnectEd's College and Career Readiness framework — the "Educational, Career, and Civic Engagement" category is equivalent to our Wayfinding Abilities, and includes: college transition skills, career exploration and development skills, and engaging in and navigating civic life. (See p. 32).

- The National Career Development Guidelines — see relevant goals in each of the three main domains in this set of guidelines: personal social development, educational achievement and lifelong learning, and career management.

- ACT's Holistic Framework for Enhancing Education and Workplace Success — the "Managing Career and Education Actions" component relates to elements of Wayfinding Abilities.

- Microsoft/Cisco/Intel and Melbourne University's Assessment & Teaching of 21st Century Skills Framework — see table 10, Living In the World – Life and Career.

- Pathways to Prosperity's Elements of Career Readiness — the nine elements map closely to the Wayfinding Abilities competencies, with the first five corresponding to the first two Wayfinding Abilities, and the last four incorporating elements of the three additional Wayfinding Abilities (p. 13).

Models with Strong Emphasis on Wayfinding Abilities

- Big Picture Schools — the following "8 non-cog competencies" (from William Sedlacek) are different from most other such formulations, placing a much stronger emphasis on a) Wayfinding Abilities and agency in the Wider Learning Ecosystem (6, 7, and 8) and b) competencies critical for at-risk students who face adverse factors (3 and 5):
    1. Positive Self-Concept
    2. Realistic Self-Appraisal
    3. Skills at Navigating Systems and Understanding and Dealing with Discrimination
    4. Preference for Long-Range Goals over Short-Term or Immediate Needs
    5. Availability of a Strong Support Person
    6. Successful Leadership Experience
    7. Demonstrated Community Service and Involvement
    8. Knowledge Acquired in or About a Field

- Generation Schools Network — attention to Wayfinding Abilities is embedded in all parts of the school model (see the "Visions of the Possible" box above).

- Summit Public Schools — the development of Wayfinding Abilities is one of several purposes driving the Summit model's Expeditions component: "In Expeditions, we are most concerned with helping you find and develop your passions and learn how to create a healthy, meaningful, productive life both inside and outside the classroom. As a provider of in-depth, real-world, life-changing experiences, Expeditions is a key part of Summit's mission to prepare every student for college, career, and life."[16]

- Project Wayfinder — a Stanford d.school project applying the principles of design thinking to helping high school students discover meaning and purpose for their lives. (See Project Wayfinder box above.)

We know from our beta piloting work with next generation educators that those interested in and inspired by the MyWays Student Success Framework are also thirsty for practitioner tools, as well as other implementation descriptions and documentation. In some cases, practitioners may be tempted to latch onto tools (such as the MyWays Whole-Student Competency Plot of the 20 competencies) and use them without the internal mindset-changing and learning-model-revising work required for successful implementation; we caution against this! We also realize that many thoughtful developers and practitioners simply want and need to see more concrete exemplars and tools in order to better understand the broader, deeper goal-line and to help them work through their own approach. As the MyWays Community of Practice grows, more pathways for use of the tools will arise, along with deeper levels of support and advice on building good practice around your own locally customized version of the MyWays Student Success Framework.

In addition to the resources listed above, the one-page primers on each of the five Wayfinding Abilities competencies that follow provide links to existing tools, such as standards, rubrics, or learning progressions. Such tools can help educators decide what to include or exclude in next generation student competency goal-lines and how best to shape them. Note that MyWays and Next Generation Learning Challenges do not endorse any specific tools for assessment or curriculum planning — particularly in ways that are incompatible with authentic Whole Learning (see Report 12, *Assessment for Broader,*

Deeper Learning for more on this approach). This set of *EdSurge* resources offers case studies of schools using MyWays, and Next Generation Learning Challenges' report, *Measures that Matter Most*, reviews some of the tools used by next generation schools to measure their progress in addressing the broader, deeper range of competencies.

Wayfinding Abilities one-page competency primers

The one-page primers that follow provide a brief introduction to the most important aspects of each competency, with pointers to why the competency is important (given students' developmental needs and the challenges of today's rapidly changing world), further description of what the competency entails, where to look for inspiration and guidance, and additional resources. These primers provide only a taste of the research and activity in each area. We hope that our MyWays Community of Practice and other educators will help add to and update these resources over time. To meet the Community of Practice members and share your ideas, see our Community of Practice page on the MyWays microsite. To receive updates on MyWays, join our mailing list.

Survey the Learn, Work, & Life Landscapes

"You can't dream unless you know what the possibilities are because dreams don't just pop up in your head."

—Sonia Sotomayor, US Supreme Court Justice[17]

"Instead of a degree in biology, emerging fields will combine biology and global health, or neuroscience and entrepreneurship... The concept of the major will erode into ... an overall portfolio with a bunch of microcredentials that speak to a whole range of strengths."

—Randall Bass, Georgetown University[18]

Brief description:

- MyWays defines this competency as "the ability to research and understand information, resources, external barriers, and internal factors relevant to upcoming transitions in school, career, and life."

- *Note*: This step integrates with Identifying Opportunities & Setting Goals (step #2) and Developing Personal Road Maps (step #3) in an iterative, adaptive way.

- Addressing this competency includes helping students[19]:

  - Research and gain real-world exposure to the rapidly evolving career and life options available in their locality and beyond.

  - Identify and understand the knowledge and skills associated with the careers or challenges that match their strengths and interests (for more on the self-knowledge side of this match, see the Opportunities & Goals competency, next).

  - Explore traditional and emerging postsecondary education, career, and hybrid work/learn options that relate to their interests, including specific transition knowledge and skills for each option (the college or apprenticeship application, resume and interviewing skills, or the processes for participating in project or freelance collaboratives).

  - Identify potential barriers in their college and career landscape that may require additional support or resources.

Where to look for ideas:

College Knowledge

- Summit Public Schools has created a set of publicly accessible student playlists for college transition, including "Admissions Requirements — My Options."

- This *Hechinger Report* article reviews a growing network of nonprofit college access organizations using innovative means to get college knowledge to students who want and need it; these organizations include College Summit, College Track, College Spring, College Possible, OneGoal, and College Board's Access to Opportunity.

Traditional Career Landscape Exploration

- See the National Career Development Association's list of sites for Career Planning, and the ACT Profile, a free online and mobile college and career planning platform that includes this World of Work Map.
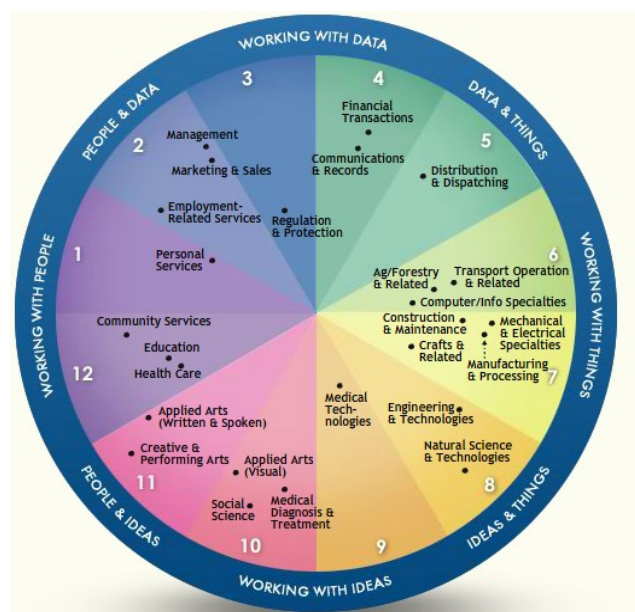
Emerging Work/Learn Landscape –

- Consider experiential exploration of the landscape through avenues like Educurious and Buck the Quo.

Additional resources as food for thought:

- See the two last chapters in *ACT's Beyond Academics: A Holistic Framework for Enhancing Education and Workplace Success.*

- See a visual framework for the emerging work/learn landscape in the ACT Foundation's *The New Learning Economy and the Rise of the Working Learner: An Anthology of Recent Evidence.*

- The next two primers have additional ideas and resources.

FOR MORE RESOURCES, see the MyWays website.

Identify Opportunities & Set Goals

"Victor from Art First [a youth development program] … started to connect his activities in the program (painting, interacting with adult artists) to his emerging identity as an artist…. [Youth are involved in] 'finding fit'… a dual process of learning about potential career opportunities… and evaluating how these match their own skills and interests."

—Nicki Dawes and Reed Larson[20]

Brief description:

- MyWays defines this competency as "the self-awareness, focus, and strategic thinking to cultivate individual strengths, identify and pilot opportunities, and set personal goals for learning, work, and life."

- *Note*: This step integrates with Survey the Learn, Work, & Life Landscapes (step #1) and Identify Opportunities & Set Goals (step #3) in an iterative, adaptive way.

- Addressing this competency includes helping students[21]:

  - Develop self-knowledge through years of self-directed and authentic learning activities, as well as access to tools to diagnose strengths, interests, and personality traits relevant to life planning. (There is significant overlap here with Habits of Success competencies.)

  - Identify learning, work, and life opportunities likely to match these abilities by focusing on the intersection of assets, aspirations, and market realities (see the diagram in the next column).

  - Create goals that point in a longer-term direction, but include interim steps that can be pursued and evaluated in shorter loops along the way.

Where to look for ideas:

- Next gen learning models that embed self-reflection, adult world learning, and goal-setting into their systems, such as Big Picture Learning, Generation Schools Network, and Summit Public Schools.

- **The College Spark Washington College Readiness Initiative's** Career Guidance Washington and AVID programs lead students to discuss:

  - Who are you? What are your interests and values? How do they align with what you want to do?

  - Where are you headed? In academics, career, life?

  - How are you going to get there? What are you doing today to set yourself up for the future?
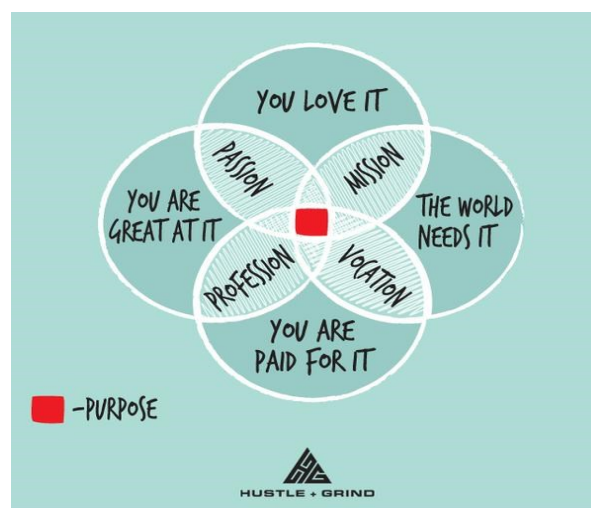
Hustle + Grind diagram shared by A.J. Juliani

- **Roadtrip Nation's** *The Roadtrip Nation Experience i*s designed to help students explore pathways for their futures. This project-based curriculum combines engaging video interviews with introspective activities to help students connect passions to school and careers.

- **Success planning electronic platforms** include MyBestBets (a postsecondary platform created by Jobs for the Future and YouthBuild USA that aligns a student's interests with regional employment needs); Blackboard Planner (from MyEdu + JobGenie, with resources from Roadtrip and Burning Glass); Naviance; and Find Your Calling from Career Builder.

- **Among the personality, strengths, and interests inventories** are StrengthsFinder and AchieveWORKS, and the ACT Interests, Abilities, and Values Inventories.

Additional resources as food for thought:

- On developing self-knowledge, identifying purpose, and using these for Wayfinding or designing your way forward, see Project Wayfinder and Designing Your Life, both out of the Stanford d.school's design thinking approach.

- For another angle on learner self-direction, see Getting Smart's Podcast Gen DIY: Emerging Options for Students Navigating Life, and the Generation Do-it-Yourself Toolkit.

- The previous and following primers have additional ideas and resources.

FOR MORE RESOURCES, see the MyWays website.

Design & Iterate Prototype Experiences

"We prototype to ask good questions, create experiences, reveal our assumptions, fail fast, fail forward, sneak up on our future, and build empathy for ourselves and others. Once you accept that this is really the only way to get the data you need, prototyping becomes an integral part of your life design process."

—Bill Burnett & Dave Evans, *Designing Your Life*[22]

Brief description:

- This MyWays competency is defined as "the ability to translate goals into action steps (or prototypes) for each new stage or transition, especially the transition from high schooler to independent, contributing adult."

- *Note*: This step integrates with Survey the Learn, Work, & Life Landscapes (step #1) and Identify Opportunities & Set Goals (step #2) in an iterative, adaptive way.

- Addressing this competency includes helping students[23]:

   - Translate goals into action plans for each new stage or transition.

        - Execute the plans through action — starting with "junior versions" or "prototypes" of work, learning, or civic activities, and building toward real-world experiences such as internships, research opportunities, and jobs.

        - Move to the next loop of the plan, adapting it based on feedback and lessons learned from the first loop. (For more on this, see the last Wayfinding competency, below.)

Generation Do-it-Yourself Toolkit

Where to look for ideas:

- Real-world learning enables students to prototype choices, gain access to the adult world, and build social capital. See chapter 7 in Big Picture's *Leaving to Learn* for a thoughtful list of approaches, including community-based learning), service learning, internships, and other work-based learning, work, travel, and early college experiences. Big Picture and Match Beyond have dual enrollment with Southern New Hampshire University's competency-based courses. See also the work/learn options discussed in Report 3 and the Wider Learning Ecosystem section of Report 11.

- For an excellent example of embedded prototyping experiences, read about Tech Valley High School's I-term experiences, which provide increasingly student-organized exposure to four different careers, helping learners discern what they like — and just as importantly, what they are not interested in pursuing.

- Work-based learning and paying work itself represent particularly good opportunities to "try on" a career choice and the social and cultural aspects of a successful transition from adolescence to adulthood. ConnectEd offers a free toolkit based around a continuum of work-based learning experiences that stretch from kindergarten through adulthood. Its expanded version of the graphic below adds sample student outcomes, quality criteria, and examples for each of the four stages.

Work-Based Learning Continuum

ConnectEd
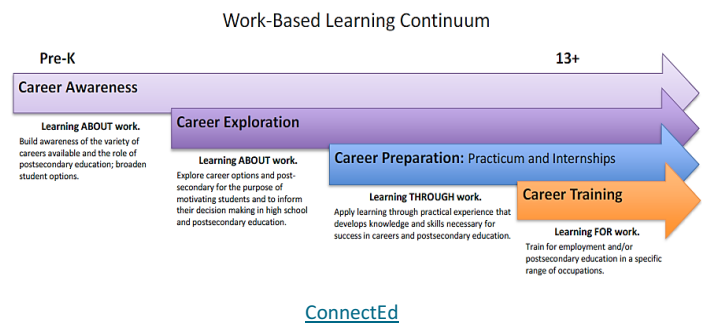
- Encourage students to think outside the box in creating action steps to help them move forward, including to explore gap years and trade paths (Buck the Quo).

- Generation Do-It-Yourself is a campaign and aggregator of resources, tools, digital media, and first-hand stories of more than 100 GenDIYers navigating their own way.

- Keeping track of prototype experiences and the competencies students develop through them can be complex. SchoolHack's LiFT platform was designed to create personalized learning plans that include real-world learning experiences.

Additional resources as food for thought:

- See chapter 6, "Prototyping," in Burnett and Evans' *Designing Your Life* for insight into the "bias to action," "build your way forward" basis of this approach. But note that prototypes can be as "proto" as shadowing someone in a career you find intriguing.

- The two previous primers have additional ideas and resources.

FOR MORE RESOURCES, see the MyWays website.

Find Needed Help & Resources

"Young people report receiving erratic adult assistance... When asked whom he relies on for [help in thinking through life options] a high school junior in one study of mostly work-bound youth notes, 'I'm not that involved with the school or with my teachers... I can't even talk with my parents. The only people I talk with are my friends.'

Other young people report that the advice and encouragement they do receive from adults — including at times workplace mentors — does not fit, because the adults do not seem to know them or their life situation well enough."

—Robert Halpern, *It Takes a Whole Society*[24]

Brief description:

- MyWays defines this competency as "the ability to identify, locate, and secure the time, money, materials, organizations, mentors, and partners needed to support one's plans."

- Addressing this competency includes helping students[25]:

  - Identify which resources they need to implement their action plans.

  - Develop the help-seeking mindset and skills to successfully secure these resources and supports.

  - Build the social capital needed to support all steps in the Wayfinding process, including mentors, role models, weak-tie contacts in their fields of interest, and strong family and friend network supports.

  - Deploy these relationships into a professional network that helps them tap insights, find better opportunities, and make better career decisions.

Where to look for ideas:

See Report 4 for the 5 Essentials in building social capital: caring friends and adults, near-peers and role models, mentors and coaches, networks and weak ties, and resources and connectors.

- Getting Smart's "*Core and More*" approach to advisory provides much of the personalized support that helps learners find the help and resources they need.

- The CollegePoint initiative is partnering with the College Advising Corps and The College Board to build a network of advisors. Other college opportunity leaders, such as

College Possible and Strive for College, are also working to support underserved youth. College Greenlight targets first-generation and underrepresented students. iMentor builds mentoring relationships that empower students from low-income communities.

- One sector-specific mentoring program example is the

Social connections

ACE Mentor Program, which inspires students to pursue careers in architecture, construction, and engineering. Generation Schools incorporates this in its intensive program; it can also be an after-school experience. Each team is set up to emulate an actual design team.

- For online resources to assist students and their advisors in accessing information for all the Wayfinding competencies, see the resources links in the other competency primers, as well as this glimpse of the future of AI and push learning for guidance.

- Groups such as ACT Foundation, Business Roundtable, and National Network are working to help people find needed help and resources on emerging work and learn opportunities through developing online tools, blueprints, and models. See the ACT Foundation's *The New Learning Economy and the Rise of the Working Learner: An Anthology of Recent Evidence* and *Learning is Earning in the National Learning Economy*.

Additional resources as food for thought:

- In addition to the wealth of resources on different types of social capital in Report 4, see also this summary of the anchor and web of support approach.

FOR MORE RESOURCES, see the MyWays website.

Navigate Each Stage of the Journey

"The challenge is that to reach goals in the real world there is often no roadmap; problems are unstructured; there are obstacles and hidden rules; heterogeneous systems are involved (e.g. different people and institutions).

According to the 'Law of Unintended Consequences,' you may be trying to get to B, but end up at Z."

—Reed Larson, "Positive Development in a Disorderly World"[26]

Brief description:

- MyWays defines this competency as "the ability to implement plans in the worlds of education, work, and life, making mid-course adjustments as required based on new experience."

- Addressing this competency includes helping students[27]:

    - Grow personal traits related to adaptability, flexibility.

    - Develop and practice specific skills related to pivoting, reframing, and changing direction.

    - Strengthen their ability to accurately appraise and take risks as they pursue professional opportunities; in the new economy, it is sometimes possible to succeed sooner by failing earlier and more often, in calculated and reflective ways.

    - Develop the skills necessary to navigate systems while dealing with discrimination or other challenges.

... to SELF-RELIANT **WAYFiNDERS**
who thoughtfully, intentionally move through their life and the world with a sense of purpose as their compass
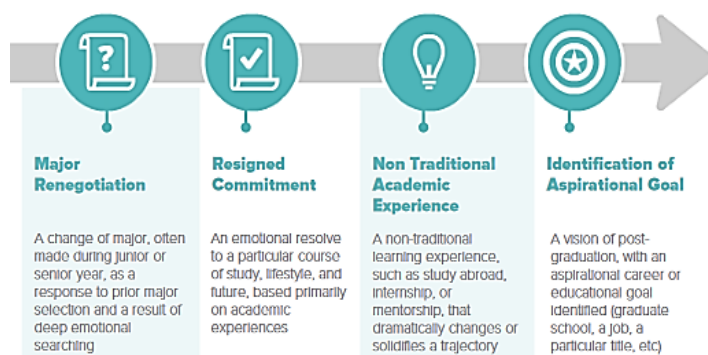*fluidly exploring many purposes*
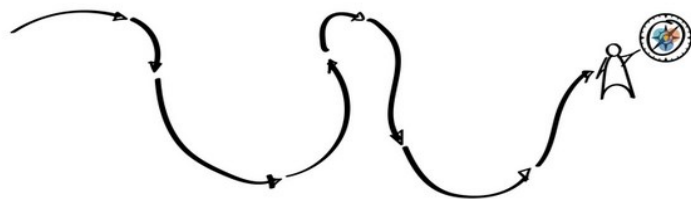
Project Wayfinder

Where to look for ideas:

- Project Wayfinder promotes the idea of self-reliant navigators rather than linear pathtakers: "We imagine student wayfinders to take on many purposeful 'voyages' over the course of their lifetime. They may not be linear,

or neatly connect, but they each represent a sustained investment of energy and effort into a project or career chapter for a period of time... A plan is more like 'flexible persistence' — have a plan and a goal, but be prepared to adapt at a moment's notice when circumstances change (and they most certainly will)." See the graphic below and Project Wayfinder website.

- MyEdu's research study, *The Academic Journey*, which illustrates the changing options and directions taken by many participants over time, emphasizing how common changes in direction are, as well as the importance of testing through real-world experience. See a more complete visual of the academic journey, starting from a

Major Renegotiation	Resigned Commitment	Non Traditional Academic Experience	Identification of Aspirational Goal
A change of major, often made during junior or senior year, as a response to prior major selection and a result of deep emotional searching	An emotional resolve to a particular course of study, lifestyle, and future, based primarily on academic experiences	A non-traditional learning experience, such as study abroad, internship, or mentorship, that dramatically changes or solidifies a trajectory	A vision of post-graduation, with an aspirational career or educational goal identified (graduate school, a job, a particular title, etc)

MyEdu, The Academic Journey

"foundational educational memory" — the kind of touchstone authentic, real world experience we describe in Report 11 on learning design — in MyEdu's resource.

- Big Picture Learning's 8 non-cog competencies (from William Sedlacek) include "Skills at Navigating Systems" and "Understanding and Dealing with Discrimination."

A few resources as food for thought:

- Getting Smart and GenDIY's podcast, "Emerging Options for Students Navigating Life."

- The "Managing Career and Education Actions" component of the ACT's Holistic Framework for Enhancing Education and Workplace Success details the kinds of behaviors that pertain to executing, evaluating, and amending plans for action.

- On adapting, pivoting, and re-grouping see the "Plan to Adapt" chapter in Reid Hoffman and Ben Casanocha's *The Startup of You*.

FOR MORE RESOURCES, see the MyWays website.

Endnotes for Report 10

[1] Bill Burnett and Dave Evans, *Designing Your Life: How to Build a Well-Lived, Joyful Life*, Knopf, 2016, p. 43.

[2] Robert Halpern, *It Takes a Whole Society: Opening up the Learning Landscape in the High School Years*, The Nellie Mae Education Foundation, 2012, p. 25.

[3] Reid Hoffman and Ben Casnocha, *The Start-Up of You: Adapt to the Future, Invest in Yourself, and Transform Your Career*, Crown Business, 2012, p. 8.

[4] Thomas L. Friedman, *Thank You for Being Late: An Optimist's Guide to Thriving in the Age of Accelerations*, Farrar, Strauss and Giroux, 2016, p. 229.

[5] Wikipedia entry. See also Project Wayfinder's overview of Polynesian wayfinding, and how this inspired many of their practices.

[6] Jeff Sandefer, "The One Key Trait for Successful Entrepreneurs: A Tolerance for Ambiguity," Acton Contributor Group, *Forbes*, May 17, 2012

[7] Amir Bhidé, *The Origin and Evolution of New Businesses*, Oxford University Press, USA, 2003.

[8] In 2009, Saras Sarasvathy contributed further to this line of entrepreneurship research concluding that "the effectual entrepreneur is one who 'fabricates' opportunities from the mundane realities of her life and value systems" rather than discovering and exploiting "opportunities that pre-exist in the world." Sarasvathy went on to codify the behaviors she observed into six Effectual Principles, including the Bird-in-Hand Principle (starting with limited means: who I am, what I know, and whom I know) and the Affordable Loss Principle (limiting risk by understanding what one can afford to lose at each step). Saras Sarasvathy, *Effectuation: Elements of Entrepreneurial Expertise*, Edward Elgar Publishing, 2009, p. xiv.

[9] Burnett and Evans, *Designing Your Life*, p. 112.

[10] Ronald F. Ferguson and Sara Lamback, *Creating Pathways to Prosperity: A Blueprint for Action*. Report issued by the Pathways to Prosperity Project at the Harvard Graduate School of Education and the Achievement Gap Initiative at Harvard University, 2014, p 54.

[11] Bernard Bull, "Where Are the Third Places in Society for Young People?" *Etale — Ideas That Matter*, January 5, 2017.

[12] Halpern, *It Takes a Whole Society*, p. 24. And with only 10–15% of high school students in a career-technical concentration that might provide greater contact with the adult world, creating other opportunities for access to the real world grows increasingly important.

[13] Susan Patrick, et. al., *Promising State Policies for Personalized Learning*, International Association for K-12 Online Learning (iNACOL), 2016, p. 18. The longer statement: "Multiple pathways often take advantage of learning opportunities outside of traditional classrooms and can include expanded learning opportunities such as after-school programs, apprenticeships, community service, internships, independent study, online courses, performing arts, private instruction, and career and technical and college-level coursework. These pathways allow students to customize their education to meet their unique needs and circumstances and gain real-world knowledge, skills, and experiences." For more on the Vermont approach see this Hechinger article, A statewide school reform gains fans and concerns while letting students learn at their own pace, and for different student case study, see this related video: How Vermont is letting students learn what they like.

[14] Thanks to Lindy Stetson and Owen Bradley of Whitcomb High School, as well as Josie Jordan and David Lipkin of SchoolHack for providing the information for this case. Jackson also presented his work to the Bethel School Board as part of the school's promotion of community and work-based learning as essential elements of the next gen secondary educational experience.

[15] Ferguson and Lamback, *Creating Pathways to Prosperity*, p. iv.

[16] This quotation is from a Summit document provided to the authors by Summit Public Schools.

[17] Quoted in Tom McGhee, "Justice Sotomayor: New justice center a "magnificent tribute." *The Denver Post,* May2, 2013. The quote cited here was from a speech she gave to eighth, ninth, and tenth graders prior to opening the justice center.

[18] Quoted in Jessica Hullinger, "This is the Future of College," *Fast Company*, May 18, 2015.

[19] Our descriptions of the Survey the Learn, Work, & Life Landscapes competency (as well as the other four Wayfinding competencies) drew from the following three sources:

1) the small subset of the competency frameworks listed in the Introduction and Overview of this series that addressed personal navigation skills — including EPIC/Conley's Four Keys (the "Go" Key), ConnectEd's College and Career Readiness Framework (the "Educational, Career, and Civic Engagement" category), The National Career Development Association's National Career Development Guidelines (all three domains), and The Assessment and Teaching of 21st Century Skills' ATC21S framework (the "Living in the World — Life and Career" elements).

2) additional career management frameworks such as Pathways to Prosperity's Elements of Career Readiness and New Zealand's Student Career Management Competencies,

3) design-thinking approaches to life planning from Hoffman and Casnocha, *The Start-Up of You*, Crown Business, 2012 and Burnett and Evans, *Designing Your Life,* Knopf, 2016.

[20] Nickki Pearce Dawes and Reed Larson, "How Youth Get Engaged: Grounded-Theory Research on Motivational Development in Organized Youth Programs," *Developmental Psychology*, vol. 47, no. 1, 2011, p. 264.

[21] Our descriptions of the Identify Opportunities & Set Goals competency (as well as the other four Wayfinding competencies) drew from the sources cited in Endnote 19.

[22] Burnett and Evans, *Designing Your Life*, p. 113.

[23] Our descriptions of the Design & Iterate Prototype Experiences competency (as well as the other four Wayfinding competencies) drew from the sources cited in Endnote 19.

[24] Robert Halpern, *It Takes a Whole Society: Opening Up the Learning Landscape in the High School Years,* The Erickson Institute, p. 25.

[25] Our descriptions of the Find Needed Help & Resources competency (as well as the other four Wayfinding competencies) drew from the sources cited in Endnote 19.

[26] Larson, "Positive Development," p. 326.

[27] Our descriptions of the Navigate Each Stage of the Journey competency (as well as the other four Wayfinding competencies) drew from the sources cited in Endnote 19.