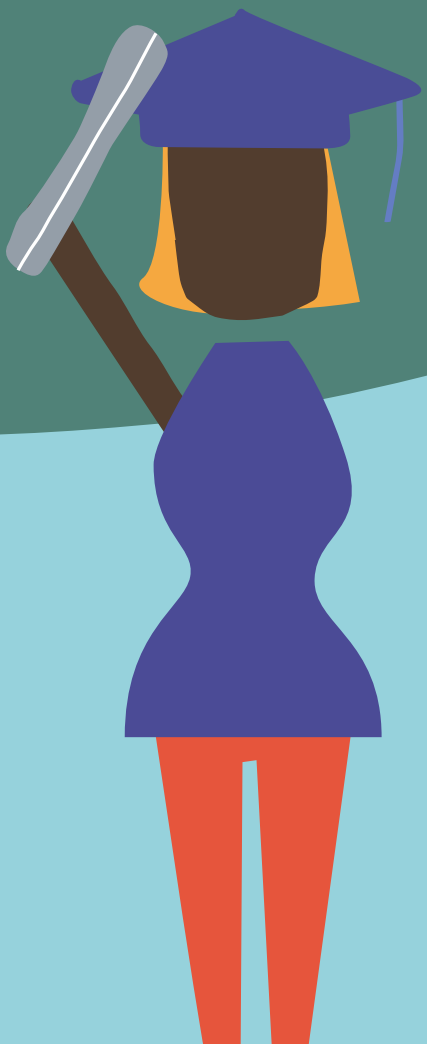
Clearing the Path

How Schools Can Improve College Access and Persistence for Every Student



Summit Public Schools
Marshall Street Initiatives

Table of Contents

Preface 3

Introduction 5

Background **/ 6**

This Research **/ 8**

Part One: The Journey To and Through College .. 11

Part Two: Needs on the Journey 16

The Four Strands and the Drivers **/ 17**

Going Deeper: The Four Strands **/ 19**

Implications for K–12 28

Designing for Learning Environments: A Self-Diagnostic Tool **/ 30**

Conclusion **/ 33**

Appendices 35

Appendix A: The Personal Advisory Board **/ 36**

Appendix B: The Oral Defense **/ 37**

Appendix C: The Best Fit Checklist **/ 38**

Appendix D: Printable Resources for Educators **/ 39**

Appendix E: Research Methodology **/ 49**

PrEfACE

In this paper, we share the results of a user experience research study of sixth graders through alumni completed at Summit Public Schools during the 2017–18 and 2018–19 school years. Our purpose was to better understand the experience of students — especially students from low-income families — as they navigate the K–12 through college pipeline. The research was conducted by the Research & Development Team at Summit Public Schools, a public charter school network of middle and high schools in California and Washington.

As a methodology, user experience research aims to understand the needs, challenges, and motivations of users as they experience a product, service, or system. By focusing on how well the users' needs are met, and how well they are able to navigate the system, the research provides a foundation for innovation and improvements to the design.

As Summit's mission is to prepare a diverse student population for success in a four-year college or university, we sought to learn what drives students as they think about their futures, what they need in order to consider and develop their next steps after high school, and why some students end up changing their plans about college after they leave high school. The research was conducted to inform Summit's continuous improvement efforts regarding college access and persistence.

Like other user experience research, we began by taking the experience of students at face value; we empathized first to more clearly understand where student needs were going unmet on their way to college completion. *Rather than asking how students can better hack their way to a college degree, we asked: How might we better clear the path for them?*

In this paper, we:

- Present key drivers of success and pain points in the college journey
- Discuss students' perceptions of school, their future dreams, the role of family, and the decisions about post-high school life that they need to make
- Propose a student-centered framework for program designers on what alumni need to persist in college and what sixth through 12th graders need to develop a mindset that college is for them
- Offer a tool to diagnose the student experience at K–12 or college contexts to inform continuous improvement efforts

We share these findings in the hopes of providing a jumping-off point for organizations looking to design and test program solutions. We hope that other program designers and student success faculty at secondary schools, college support programs, and postsecondary schools can use these findings to guide their program design and continuous improvement efforts as well.

About Summit Public Schools

Summit Public Schools is a middle and high school public charter school network located in California and Washington. Summit focuses its instructional design on strong academic preparation and habits needed for students to be successful in four-year colleges and universities. Students develop, through real-world projects, a set of cognitive skills that are interdisciplinary and aligned to college and career readiness. Students acquire key content knowledge at their own pace and demonstrate proficiency when they are ready. Moreover, students practice "habits of success" to prepare them for becoming lifelong learners. Finally, Summit intentionally fosters a college-going culture by offering college visits and AP classes for every student, and dedicated support from a mentor throughout the process of applying to at least one four-year college. For more information on the research behind Summit's commencement-level outcomes and aligned school model, see ***The Science of Summit***. Additionally, for an in-depth view of Summit's approach to college and career readiness, see Summit Public Schools' CEO Diane Tavenner's 2019 book for educators and parents, ***Prepared: What Kids Need for a Fulfilled Life***.

Authors

Taylor Garland
Amy Sandoz

Researchers

Taylor Garland
Pilar Strutin-Belinoff
Betty Chen Rojas

Contributing Editors

Adam Carter
Kyle Moyer
Alexandra Swanson

Special Thanks

Dr. Becky Bobek, ACT Research
Dr. William Damon, Stanford University
Dr. Todd Kashdan, George Mason University
Dr. Lisa Kiang, Wake Forest University
Dr. Heather Malin, Stanford University
Dr. Paul Nichols, ACT Research
Dr. Pamela Paek, ACT Research
Dr. Brooke Stafford-Brizard, Chan Zuckerberg Initiative
Yutaka Tamura, nXu
Kenneth Williams, Chan Zuckerberg Initiative

Acknowledgments

Nadine Abousalem
Max Beach
Mira Browne
Meilani Clay-Solomon
Abdul Duso
Sazan Ghafur
Katie Goddard
Lisa Goochee
Kate Gottfredson
Aaron Gourdin
Megha Kansra
Sophia Kokores
Ross Lescano Lipstein
Jackie O'Connor
Donna Park
Giovanna Santimauro
Howard Shen
Diane Tavenner
Lissa Thiele
Lucretia Witte
Jenny Zhou

Introduction

BACKGROUND

A four-year college degree remains the most likely path to economic mobility and well-being. According to the Pew Research Center, the gap in earnings between high school and college graduates has been widening. Young Millennial college graduates outperform their peers with less education on almost every measure related to income and job satisfaction (Taylor, 2014). Additionally, college degrees are a requirement for a growing number of jobs. Since the Great Recession, the highest job growth has been for individuals with a bachelor's degree or better, with 99% of new jobs having gone to individuals with at least some college education (Carnevale, 2016). Student confidence in college remains fairly high as well: 89% of recent college graduates expect their degree to pay off, and among high school students, 87% of students hope to earn a bachelor's degree (Youth Truth Survey, 2016).

However, four-year college outcomes remain inequitable for historically underrepresented groups. At America's top 500 selective universities, where 70% of attendees are white, 82% of college students graduate; while just 49% of college students graduate from open-access colleges, which includes most community colleges, where nearly 50% of attendees are students of color and/or from low-income families (Lash, 2017). According to an analysis of National Center for Educational Statistics data, students from low-income families, as measured by Pell Grant recipients, graduate at a rate of 18 percentage points less than their non-Pell peers (Whistle, 2018). With such wildly disparate outcomes, it is clear that the current higher education landscape is not reliably meeting the needs of all students.[1]

The upfront risk of investing in college is high. The decision to go to school full-time is a particularly difficult one for low-income families because of the opportunity cost. Going to school means passing up on full-time wages that could pay for much-needed living costs for their families (Goldrick-Rab, 2016). Additionally, if a student starts but does not complete a degree, the potential debt is significant. In 2018, the average debt load per student for a bachelor's degree at college graduation ranged from $4,400 to $58,000, with an average of $22,785 in California (Cheng, 2018). After college, direct paths to a high-paying job immediately out of college are hard to find — even with a bachelor's degree in hand. According to Next Generation Learning Challenges' MyWays research, currently, half of all under-30 college graduates are working a job that requires less than a four-year degree (Lash, 2017). Despite the clear long-term benefits of four-year degrees, the upfront financial risk causes families — particularly low-income families — to question their ability to invest in college. With only 60% of students completing a degree

[1] Studies have also identified institutional characteristics with significant effects on virtually every measure of college success (Mayhew et al. 2016; Pascarella & Terenzini 1991 & 2005), including the quality of instruction, resources and extracurriculars, faculty-student interactions, academic support and encouragement, group cohesion and community, faculty and peer culture, academic policies, patterns of bureaucracy and collegiality, and institutional mission and priorities (Therriault, 2014; Muraskin, 2004; Terenzini and Reason, 2005; Berger and Milem, 2000). According to the Opportunity Insights group at Harvard University, even though children from the poorest families are substantially less likely than their peers from richer backgrounds to reach the top of the income distribution, the difference almost entirely disappears when comparing two students at a single college. Elite schools, for example, have relatively few low-income students on campus, but those students are very likely to succeed economically.

from an American four-year institution within six years, according to the National Center for Education Statistics,[2] many students search for less financially risky paths to enter the workforce.[3]

We must clear the path for students. The reality is that the majority of high school students can see the long-term benefit of a college degree and do want to go to college. The systemic challenges and risks that they face create an urgent moral imperative for K–12 and higher education to design more equitable pathways, especially for students from low-income families and students of color. Furthermore, in K–12, we must immediately adopt structural solutions to ensure that high school students, especially those from low-income families, are able to make well-informed decisions at graduation about the costs and benefits of their various postsecondary options.

As long as a four-year college remains the best ticket to economic mobility, the ability of students and families to navigate their way to and through college should remain a top priority for both K–12 schools and colleges. Our collective goal must be to provide each student with a clear pathway to a baccalaureate degree.

[2] For students starting in 2010.

[3] "Research consistently demonstrates the negative implications for college enrollment when college prices increase and grant aid decreases; the negative effects are particularly large for the enrollment of students from low-income families" (Perna, 2010).

This Research

Looking Beyond Academic Readiness

Academic preparation is justifiably at the center of K–12 education. Studies have found high school grade point averages (GPAs) to be stronger predictors of later college achievement than other significant factors (Hoffman & Lowitzi, 2005; Livingston, 2007; Zheng, Saunders, Shelley, & Whalen, 2002), and ninth grade GPA to be more predictive of high school graduation than all other factors combined (Allensworth, 2013; Easton, 2017).[4]

However, the challenges that low-income students face in college access and persistence cannot be fully explained by lack of academic preparation. Indeed, the choice to believe that one of a student's college options is worth the time, investment, risk, and effort requires more than just grades and test scores. Integrating into the college environment, navigating the college process, getting enough academic and emotional support, feeling underprepared — these extra-academic challenges, largely related to the experience of being a student, are symptoms of a poorly designed system and must be addressed by K–12 and higher education alike. There is a significant research base identifying the skills and knowledge that students need for college and career readiness (Conley, 2014; Duckworth et al., 2007; Borsato, Nagaoka, & Foley, 2013) and documenting dozens of known social and contextual factors faced by first-generation and low-income students.[5]

Building off Previous Research and Frameworks

We are grateful to be doing this research alongside many other organizations pursuing solutions to better prepare students. A few that have been especially influential in how we think about college persistence, including the role of non-cognitive, socio-emotional, institutional, and extracurricular factors in postsecondary education, are listed below:

- **The Chicago Consortium on School Research** and the To & Through Project at the University of Chicago have conducted 25 years of research for policymakers and practitioners. **Foundations for Young Adult Success**, in particular, defined readiness broadly.
- **Jobs For the Future** builds programs and policies toward college and career readiness and emphasized noncognitive factors such as identity and belonging in their paper, **Beyond Academic Readiness**.

[4] According to the University of Chicago's Consortium on School Research, being "on track" as a freshman predicted educational attainment better than test scores, and when examining only students who enrolled in college, ninth grade GPA predicted retention through the end of freshman year. It is also highly predictive of access to selective colleges (69% for >3.0 and "on track"; 1% for students "off-track"). "About 18 percent of students who had an F freshman GPA went on to college… 70 percent of A students did" (Easton, 2017). Pascarella and Terenzini (2005) found grades in college to be one of the most consistent predictors of persistence and degree completion as well.

[5] Factors include: a greater fear of failing, increased worrying about financial aid, feeling the need to put more time into studying, feeling less prepared, knowing less about their social environment, and having less familial support (Terenzini, et al.,1996). They face obstacles related to underrepresentation, belonging, academic preparation, access to aid, navigating the process, and family support (Falcon, 2015; Stewart, 2015; Haskins, 2008). Personal and social integration into campus life and the college environment is a key variable in the decision to leave college (Tinto 1993; Braxon 2000; Astin, 1984). The process is time-consuming, mysterious, and daunting (Turner & Patrick 2004; Alon & Tienda 2005; Pallais & Turner 2006). Most students also struggle to manage their own anxieties about their ability to fit in at college and adapt to its institutional norms and culture (Bean & Eaton 2000).

- **David Conley and The Education Policy Improvement Center (EPIC)** created the "Four Keys to College and Career Readiness" (Think-Know-Act-Go) as a framework to define readiness as not only having key content knowledge, cognitive strategies, and learning skills and techniques, but also knowledge about the transition to college.
- **KIPP Through College** has highlighted changes needed to support students with college persistence in their **higher education report**, while also identifying five areas that students themselves need to be prepared: a) Have a Purpose, Passion, and Plan; b) Focus on Academics; c) Network and Navigate; d) Be Financially Fit; e) Know Who You Are.
- **Heather Malin's** purpose development model in *Teaching For Purpose* (2018) provides a framework centered on three dimensions (beyond-the-self motivation, goal activity, and meaningful goals) and three underlying strengths (social agency, self-regulation, and values) to support students with developing a sense of purpose.
- **Ben Castleman's** research identified reasons behind students changing their mind or reassessing their college decision over the summer, including: absence of school mentorship and support, confusion over paperwork and logistics, lack of parental guidance through the process, the tendency to procrastinate or be swayed by peers' decisions, a lack of confidence that they would be able to pay off loans, and a desire to contribute financially or emotionally at home.
- **NGLC's MyWays Student Success Series** provides an in-depth look at changing economic conditions and describes competencies for young people to successfully navigate a more uncertain future: a) habits of success, b) content knowledge, c) creative know-how, and d) wayfinding abilities.

These organizations have helped to define what success looks like for K–12 education in preparing students to enroll in and persist in a best-fit college of a student's choosing. They point to the breadth and importance of non-academic factors, and we have been inspired by this growing body of work. With this paper, we hope to deepen our collective understanding by focusing on how students experience the many systemic and personal challenges on their way to and through college.

Research Approach

Our research began in the 2017–18 school year by interviewing Summit alumni from the high school classes of 2015, 2016, and 2017 — including alumni currently in four-year colleges, two-year colleges, vocational schools, and the workforce — to develop an understanding of the causes of college persistence and "melt."[6] To ensure that student responses would be unbiased, we asked alumni broad, open-ended questions and listened for what was most important to them before probing on a particular need or challenge. Sometimes needs were met ("my family helps me with applying for college"), and sometimes they were not ("my mom is really confused about what to do").

In our research with alumni, it became clear that many students had never really seen past high school. They had made decisions about college and life based on assumptions and incomplete information. Many students were not sure if the extra debt required for attending college was

[6] "Melt" (or "summer melt") refers to the phenomenon in which students are accepted or intend to go to college but do not actually end up going. Nationally, between 10 and 40 percent of high school graduates who intend to go to college do not enroll the following fall (Castleman & Page, 2014).

worth it, or whether they'd like college enough to endure four more years of school. The words of Eduardo, from the high school class of 2017, illustrate how many students feel about these complexities: "Why would I owe money to be unhappy? I would have been comfortable owing that much if I was somewhere where I was really happy. I'm starting to see that in other kids in my class too. They're each stressed out. Kinda not knowing their next moves either." The complexity of postsecondary choices was met by a student need for more information and more guidance. In the face of these challenges, students ultimately questioned what they really wanted for themselves as people. They wondered, "are the challenges of college 'worth it' for me?"

With this knowledge in mind, we began a second research project in the 2018–19 school year to unearth the needs of sixth through 12th graders as they considered and developed their next steps after high school. Through observations and interviews with students, teachers, and parents, we began tracking the key needs and challenges that alumni had expressed back through the middle and high school years.

By the end of the research, we had conducted semi-structured user interviews with 46 alumni and 90 current students. We spoke with 40 teachers and 21 parents, who provided context on how student needs manifested at home and in the classroom, and where our gaps were in meeting those needs. We also interviewed 11 students from non-Summit schools to corroborate findings. Finally, we discussed the research with 22 professionals in the field of postsecondary education and college persistence.



"Why would I owe money to be unhappy? I would have been comfortable owing that much if I was somewhere where I was really happy...I'm starting to see that in other kids in my class too. They're each stressed out. Kinda not knowing their next moves either."

— Eduardo, high school class of 2017

From this diverse group of participants, we were able to identify and validate specific needs ("to get advice from my family" or "to make meaningful friendships at school"), as well as unearth a broader framework that individual students may have been unable to put words to on their own.[7] In this paper, we share: a) a description of each of the main phases of the student journey; and b) the most important needs and challenges that contributed to a student successfully or unsuccessfully navigating to college completion.

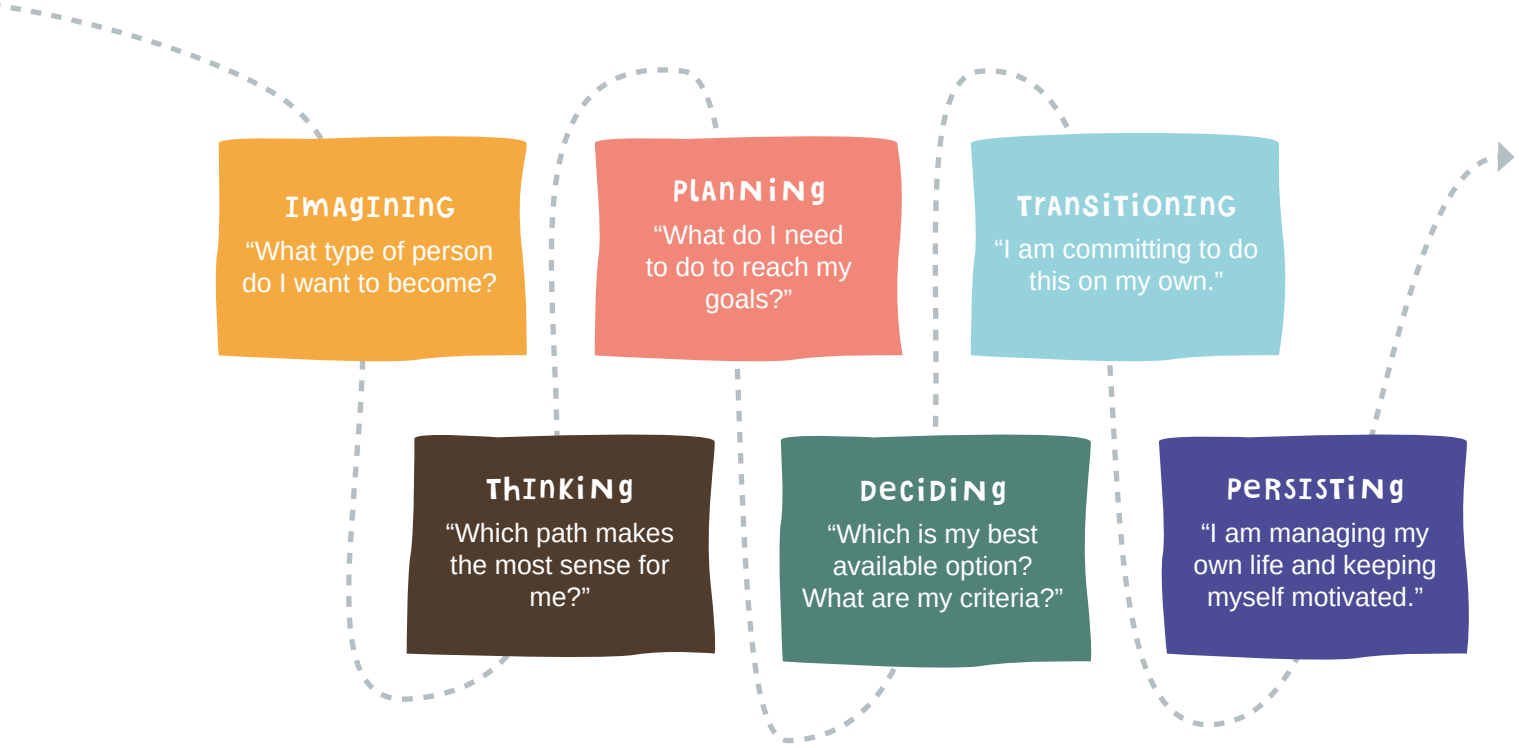
[7] "Although over half of our participants were students from low-income backgrounds and/or with a current GPA less than 3.0, Summit Public Schools serves an intentionally diverse student population. As a result, this research includes a high degree of variation in student experiences, demographics, and interests. Additionally, the framework shared includes the most important, journey-relevant needs regardless of whether the needs were met or unmet on an individual student level. As a result, this framework can support organizations regardless of their exact demographics. For more on our research methods, see Appendix E.

Part One:

The Journey To and Through College

The Journey To and Through College

While every individual student progresses through the stages differently and at different times, the process outlined below is a shared journey that most students go through as they move toward and persist in their next step after high school:



We found that it is helpful to group the journey into three main phases where needs are shared:

Imagining

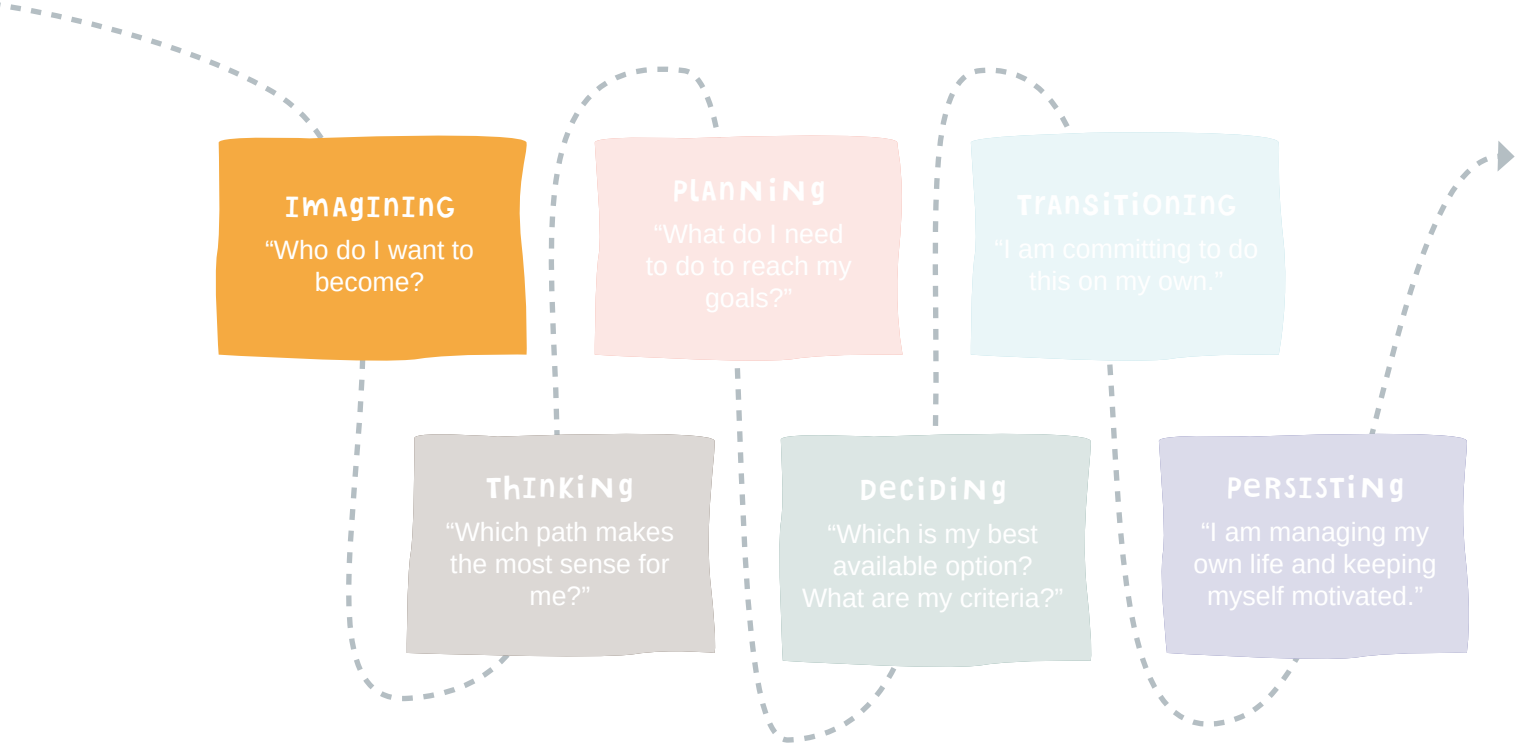
The phase of the journey up until the transition to high school, before grades actually "count" for college and when students do not yet feel much pressure to narrow their choices.

Thinking and Planning

The phase of the journey in 10th and 11th grade when students feel pressure to narrow their options, select a long-term goal and begin planning, but before students have to make a final decision about college.

Deciding, Transitioning, and Persisting

The phase of the journey from 12th grade onwards when students make choices based on a complete set of "real-world" needs.



IMAGINING (~6TH–9TH GRADE)

"Who do I want to become?"

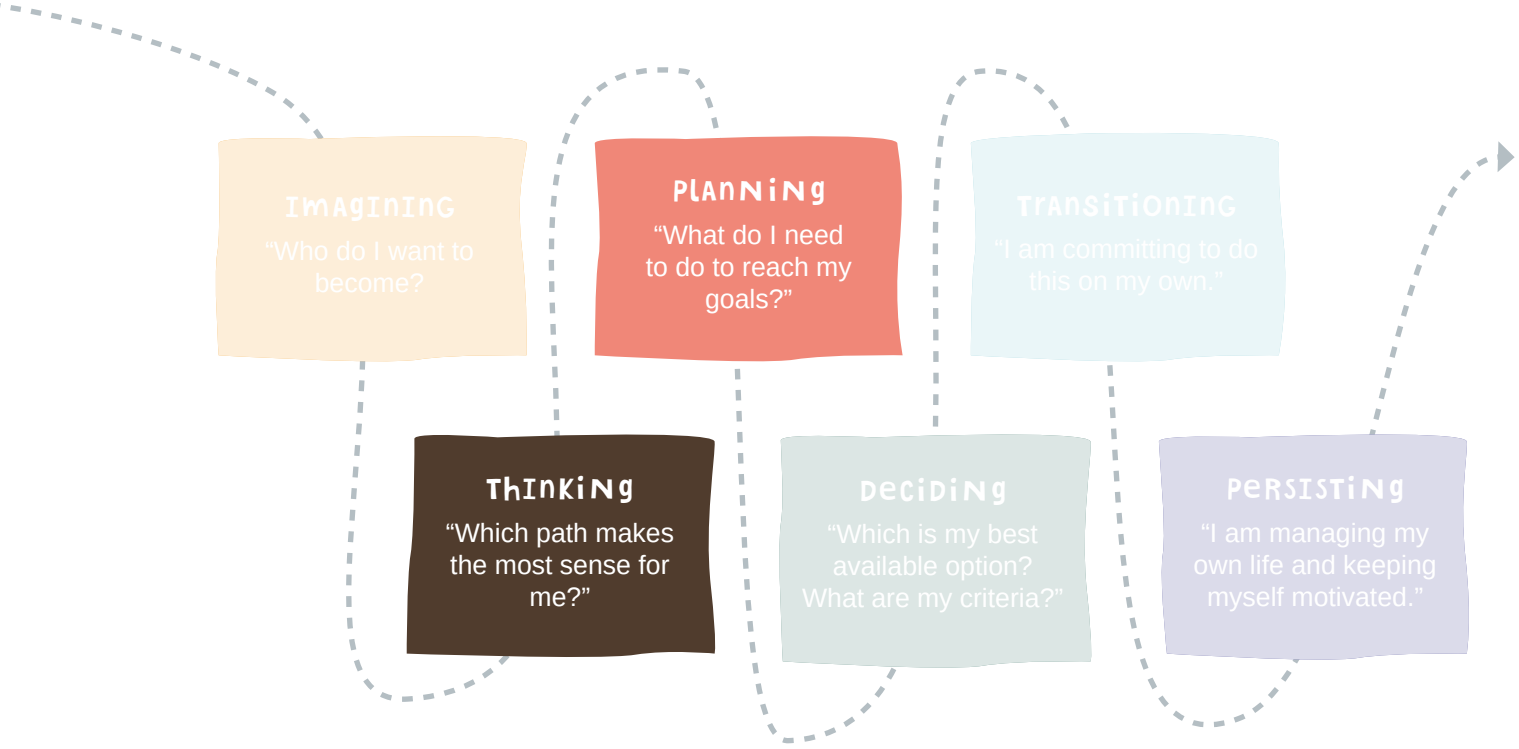
In middle school, and sometimes in early high school, students fantasize about a future in which anything is possible. Their dreams are usually a reflection of how they see themselves and their emerging identities. They hope for financial stability, having a job they like, helping people, or doing what they love, like playing basketball. Families are the biggest lever for future thinking, providing role models, depth, and specificity to the dreams. Students themselves, however, are focused on their current environment: their desire for social status and connection, for good grades and meeting expectations, and for extracurricular fulfillment such as gaming, sports, and YouTube.

Takeaways for educators: To develop the knowledge of self and world needed for the complex college-related decision-making in later adolescence, sixth through ninth graders need highly relevant, social, and experiential learning opportunities. Schools should provide opportunities for students to make deep connections with their authentic interests, debate their values, and gain significant real-world exposure. Additionally, schools can build deeper connections with families to leverage their expectations and values. Ultimately, it is most important to provide rich experiences that inform and develop students' social and personal identity and their understanding of the world around them.



"I asked my dad what jobs pay best, so that I won't have to be homeless, and he said doctor."

— Laura, seventh grade



Thinking and Planning (~10th–11th Grade)

"Getting stuck"

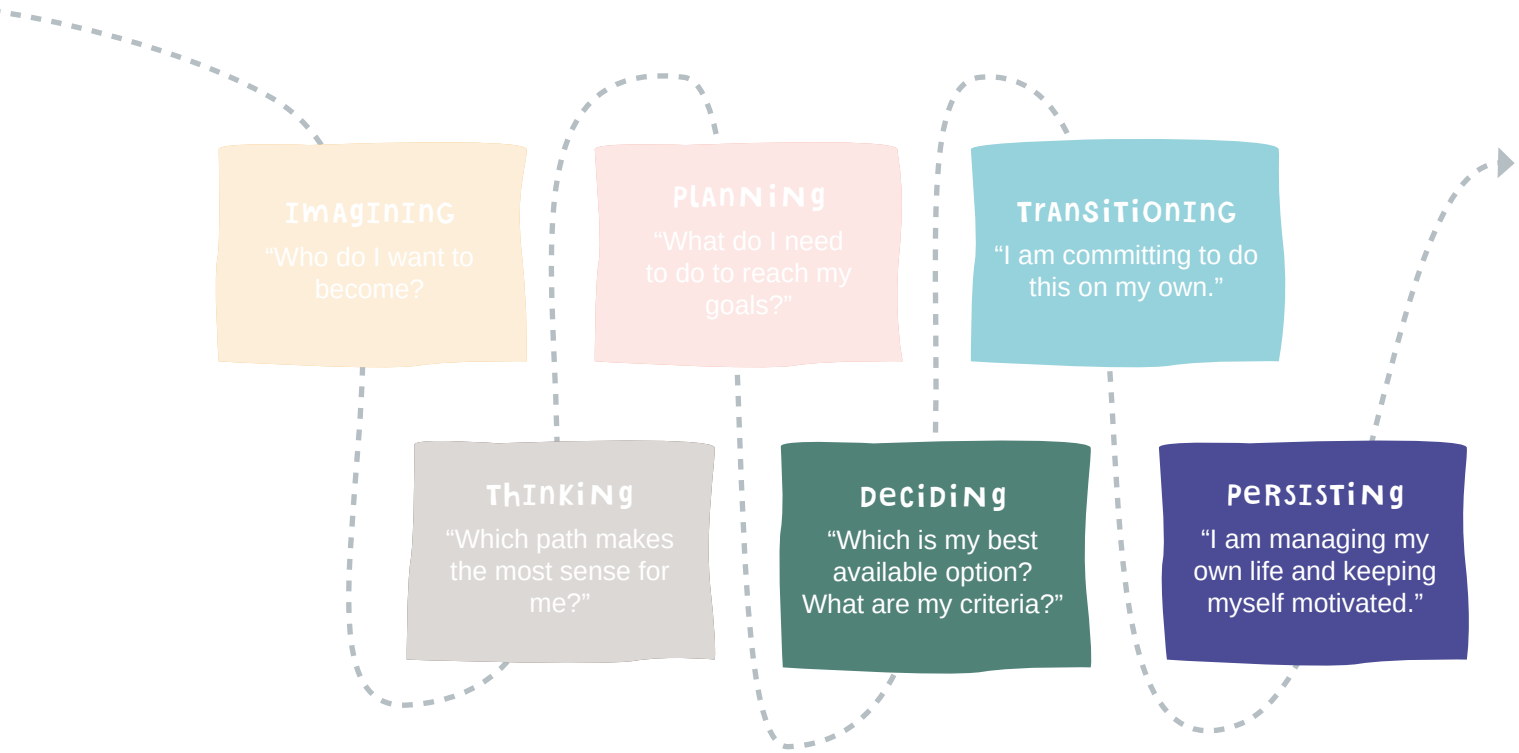
During Thinking and Planning, students start to think tactically about their future. In Thinking, students consider specific careers, colleges, and college majors that are of interest and select one or two as their goals. In Planning, students then engage in planning for those goals and soliciting guidance on those plans. An obstacle for students is if they "get stuck" in the Thinking phase and do not progress into Planning. "Getting stuck" can happen when students in high school do not see a future career or college that is a match between their emerging sense of purpose, interests, values, and current realities. Students want financial security and a good job, but this phase is about contingencies and cost: wondering about the cost of college, if their hobby or interest could actually be a career, not feeling confident they would like or be successful at school, and not believing that they would like an "office job." The family unit is often deeply connected to this thinking process. During the Thinking phase of the journey, it can be hard to choose a way forward when there is no decision to be made yet, so some students ruminate about the future and wonder if there is an "easier way out."

Takeaways for educators: "Stuck" 10th and 11th graders need to significantly deepen their vision, knowledge, and awareness. They need to define success on their own terms. It's critical to involve their families, give opportunities to discuss and deepen their interests and values, and provide personalized, individualized counseling on connections between their interests and values and career pathways they might like to pursue after high school. Personal considerations related to family or finances, and academic considerations related to not feeling successful or belonging at school, or having a lower GPA, add complexity to their ability to decide on a specific future goal.



"They give me options, which gets me thinking...but I don't want to regret making a decision too early."

— Karen, 10th grade



Deciding, Transitioning, and Persisting (~12th grade–alumni)

"Shifting contexts"

As a senior in high school, the student considers costs and benefits, decides on what a "best fit" next step is and makes a choice. The same needs pop up again and again: academic preparedness, social belonging, financial readiness, family involvement, motivation, and goal planning. However, in the summer after graduation, the cost of college quickly starts to feel real, students worry about independently managing their academics, and they attend college orientation. Some newly independent students rethink their college decision in light of these challenges. In college, their financial cost-benefit may again change if the student does not feel they belong — or have a rightful place — on campus. Others re-evaluate their decision because they do not like their intended major, because they struggle in classes, or because of family obligations. During this phase of the journey, faced with the experience of being at college, students look at whether the experience, the long-term benefit, and the reputation of the school makes the investment in college worth the effort, time, and cost.

Takeaways for educators: Given that GPA is mostly static by 12th grade, the biggest need is for seniors to be able to make well-informed decisions about their postsecondary options. Unable to see clearly beyond the walls of high school, students need real experiences of careers and colleges to inform their decisions. Schools should involve families throughout a structured decision-making process. During the transition, students also benefit from continued support. Since every situation is different, many students need an informed guide or role model who can help them adapt when they stumble across a new challenge. Finally, since a higher GPA allows students access to colleges with higher graduation rates, schools need to invest significantly in academic interventions for 10th and 11th graders, together with GPA and college awareness for students and parents.



"Once I went to orientation, I wasn't going to lie to myself. That's when I turned everything down."

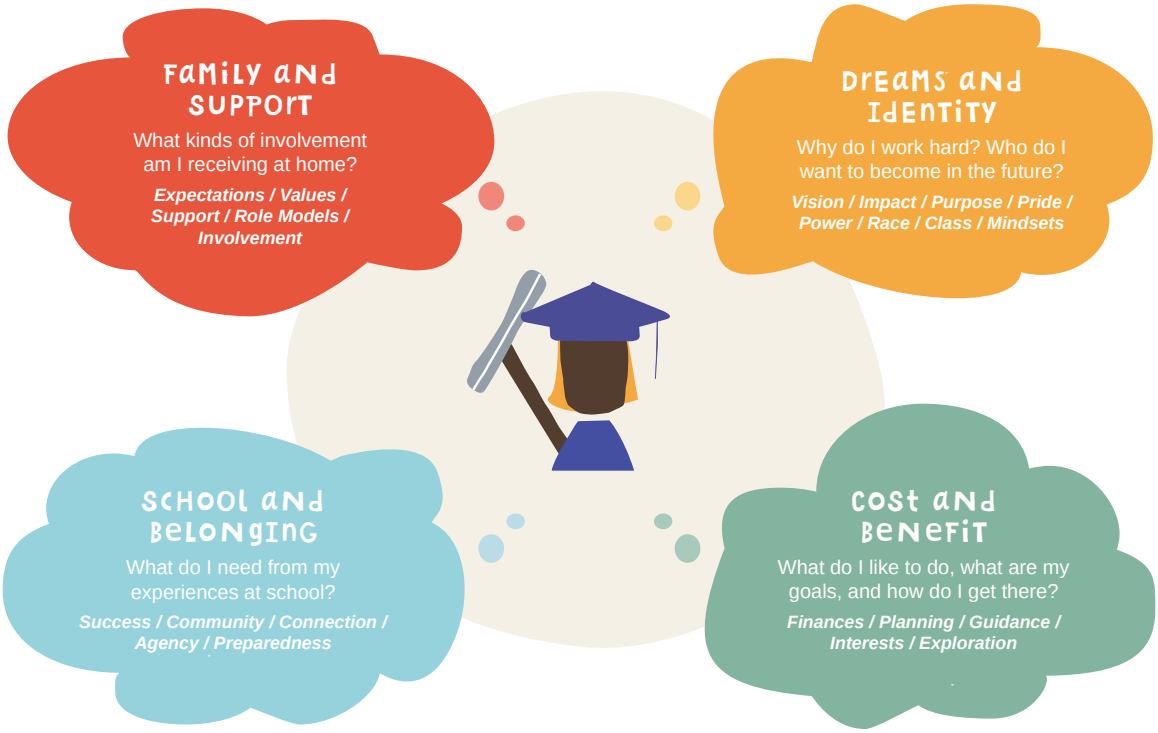
— Karen, high school class of 2016

Part Two:
Needs on the Journey

The Four Strands and the Drivers

The Four Strands

Through a cross-functional synthesis process (see Appendix E for methodology), we identified key clusters of needs and challenges. These big categories of need shifted throughout the journey as students got older and their contexts changed. Looking across the entire journey, however, we saw commonalities. We call these four commonalities **strands** because of the way they can be tracked across a student's whole journey from sixth grade through high school graduation and beyond as alumni.

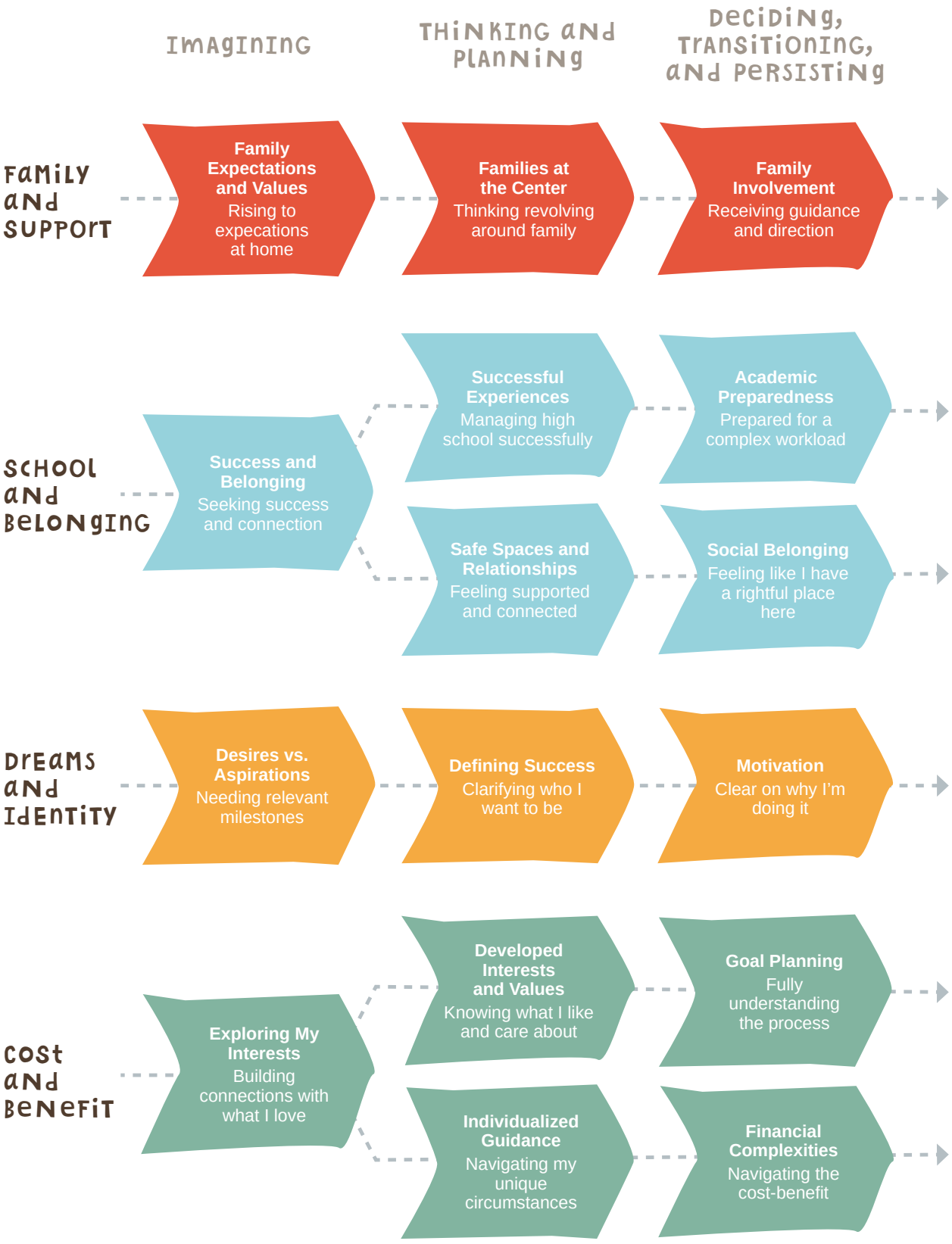


The Drivers

In this framework, each of the four strands contains a set of **drivers**, which are the most important areas of need voiced by students within each strand. Drivers tend to be met for students who navigated to and through college and unmet for those who chose a different path. They were ingredients in the college decision and antecedents to college persistence.

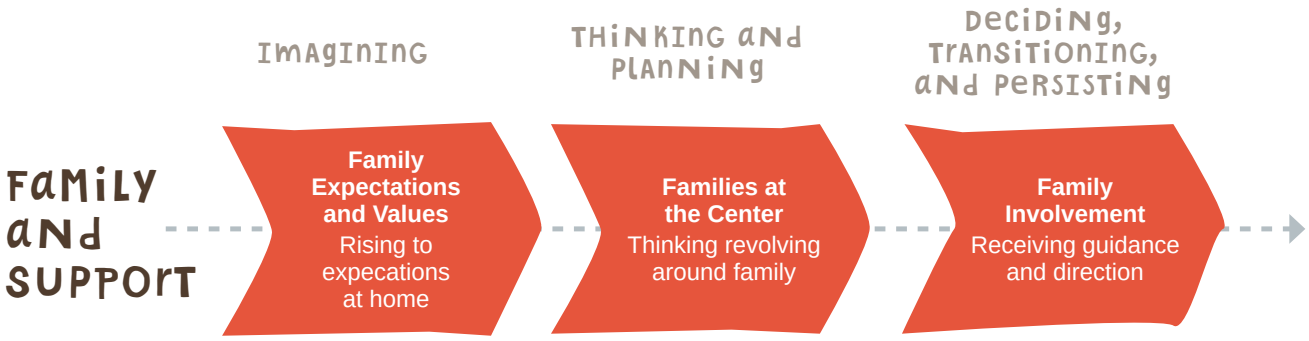
The visual that follows shows which drivers are most important to students within each strand and **during each stage of the journey**. It is meant specifically to support the development of programmatic, instructional, and curricular solutions that are aligned to different phases of the student journey.

The DRIVER Framework



Going Deeper: The Four Strands

In the following pages, we share specific needs and challenges that we heard from students and validated across participants (needs that were expressed only once or twice are not included). The purpose of these pages is to detail how the needs shift over time so that schools can assess whether students' needs are being met and develop age-appropriate solutions when needed.

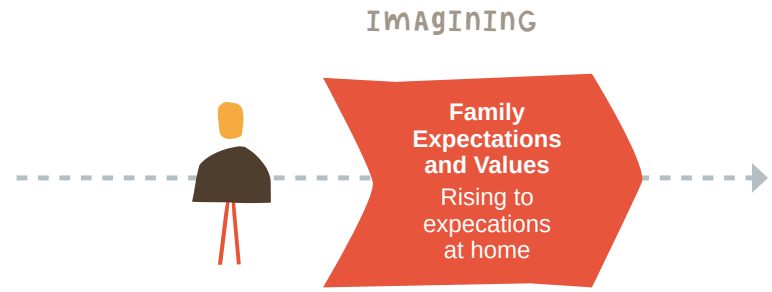


The family unit guides students throughout the journey. In the early grades, families are the most powerful influence on future thinking, as students rely on family guidance and are driven by family expectations. Parents and caregivers help students develop long-term aspirations and values and then help keep them motivated in a variety of ways — from staying on track in school to doing extracurricular activities. In these years, students begin to accept values from their peers as well. In later grades, most students are able to develop value systems of their own, but families remain central to how a student imagines, prioritizes, and develops criteria for their next step. Parents, cousins, siblings, aunts, and uncles play the role of giving structure to an uncertain future; the more positive role-modeling and inspiration from families, the more a student feels confident in their vision. It is challenging for students to envision the future without stable home environments, and for those students, schools must play not only the role of school but also of family. As students enroll and persist in their next step after high school, financial decision-making is also usually driven by family involvement, and students need a way to resolve differences when family needs are misaligned to their own goals.



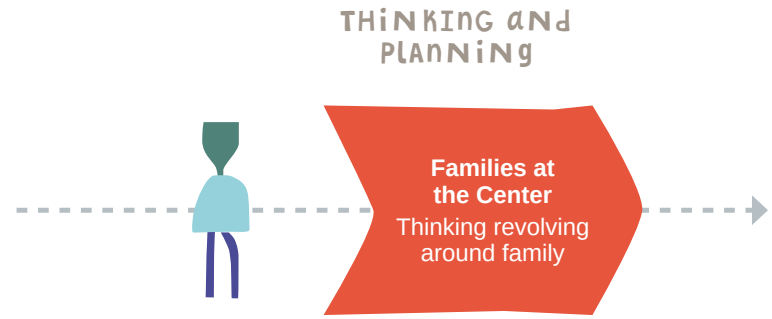
"My parents say, you have the opportunity to do better, to be someone, to be better… My mom sees greatness and determination in me."

— Calvontre, seventh grade



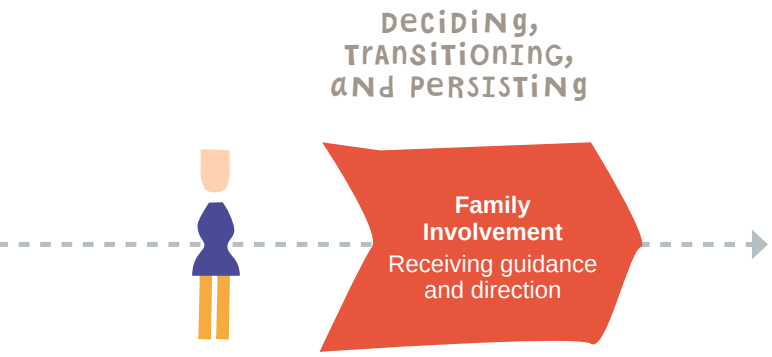
Students envision their future relative to the impact it will have on their family, and the expectations and examples that are set.

"College has been the expectation in my family for so long that I've sort of embodied those expectations."



Students think about plans for life after high school based on role models and what they think their family would be able to support.

"It's kind of difficult having conversations about college with family when they aren't from here."



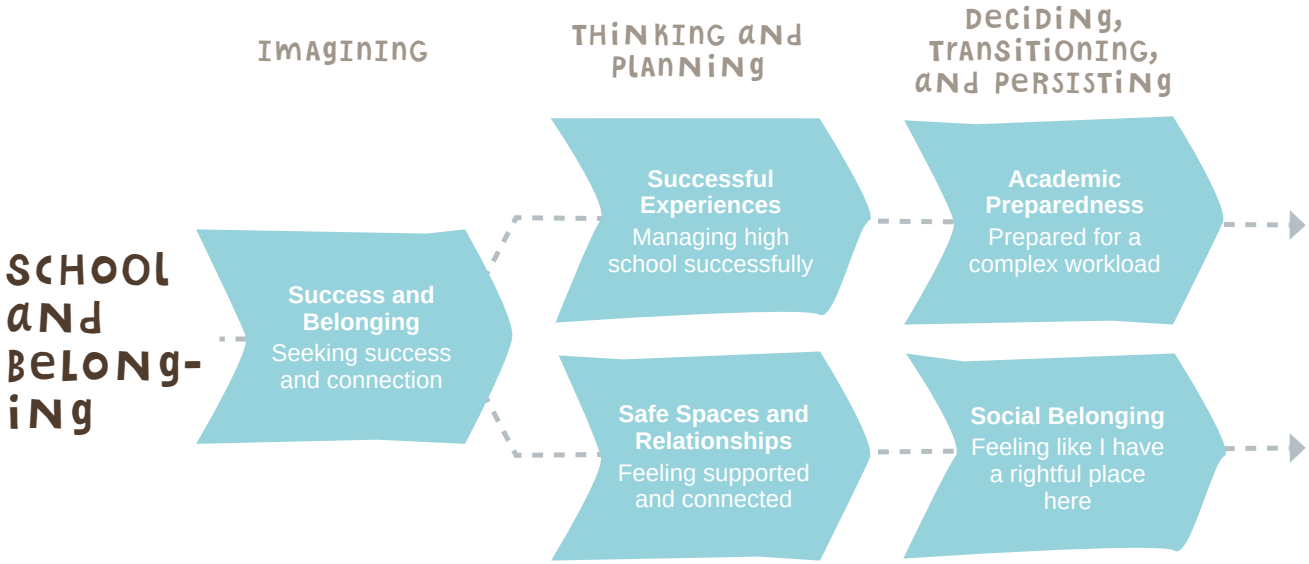
Students look to their family unit for support, and need their involvement to be helpful, productive, and aligned to their own goals.

"We weren't aware of what to do, when to do it, and how to do it. It was really confusing."

What the secondary research says:

- Students whose parents had college experience tended to have a stronger understanding of what the college experience would be like (Pascarella, Pierson, Wolniak, & Terenzini, 2004; Collier & Morgan, 2007) and are more likely to persist (Ishitani, 2006).
- After themselves, college sophomores identify their family as the most important relationship influencing their college success, with friends after that (Weyt, 2012).
- Students who have high expectations and strong performance goals are more likely to persist (Kahn & Nauta, 2001; Titus, 2004). One consideration is that stress has also been identified as a factor negatively affecting persistence for college freshmen (Perrine, 1999; Zhang and RiCharde, 1998), and inversely related to academic performance (Pritchard and Wilson, 2003).
- "[Participants] with purpose were more likely to say their family members encouraged their personally meaningful goals and interests" (Malin, 2018).

- Students need modeling from their parents about ways to contribute to society, and they need encouragement to participate in exploring those goals. It is helpful for students to take on family support roles (Benson, Leffert, Scales, & Blyth, 1998).
- Adolescents are developing their own personal values; they usually accept the values of parents or key adults (Scales, 2010).
- The degree to which students viewed their home and peer cultures as compatible with school is related to motivation and performance (Phelan, Davidson, and Cao, 1991).

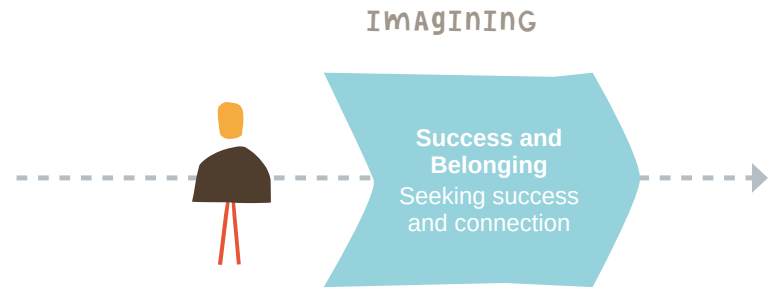


A student's journey depends on their experience of school. Finding success and belonging at every stage of the journey contributes to a sense of agency and the desire to keep going. In the earlier grades, students feel that their ability to be successful in school and to belong at school are sometimes conflicting needs. Middle school students, who are especially focused on social status and peer connection, sometimes struggle to find academic success in the face of social conflict and other distractions. In later grades, academic needs related to the college decision emerge — GPA begins to "count," students take AP classes, and wonder about being prepared for college. In the face of rising stress, students need supportive, safe spaces and strong relationships at school. In selecting a college, students often prioritize the "vibe" of a campus, whether they can picture themselves there, the students they see on campus, and their academic confidence level. Once in college, the journey is less about confidence than about being truly prepared academically and finding belonging in a new environment. Students new to four-year colleges, in particular, need to develop strong friendships, especially as they face challenges related to managing a more rigorous workload.



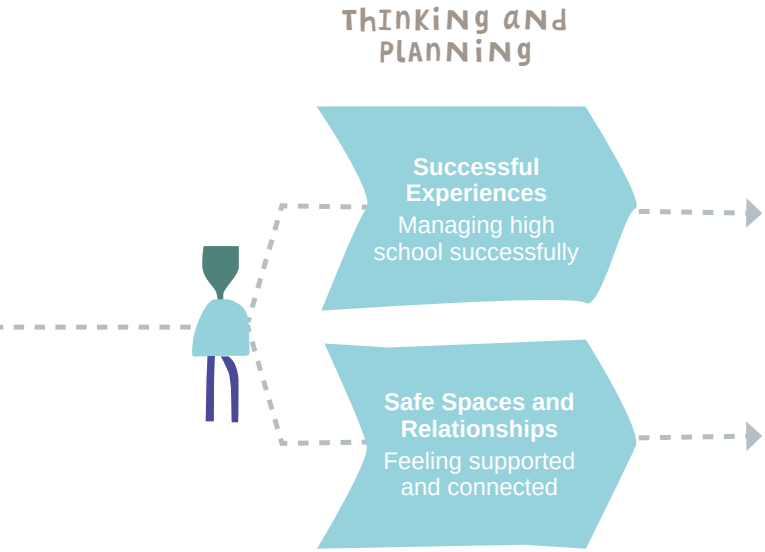
"Freshman year was really hard. I missed home. I wasn't really happy until I found my crew."

— Iris, high school class of 2016



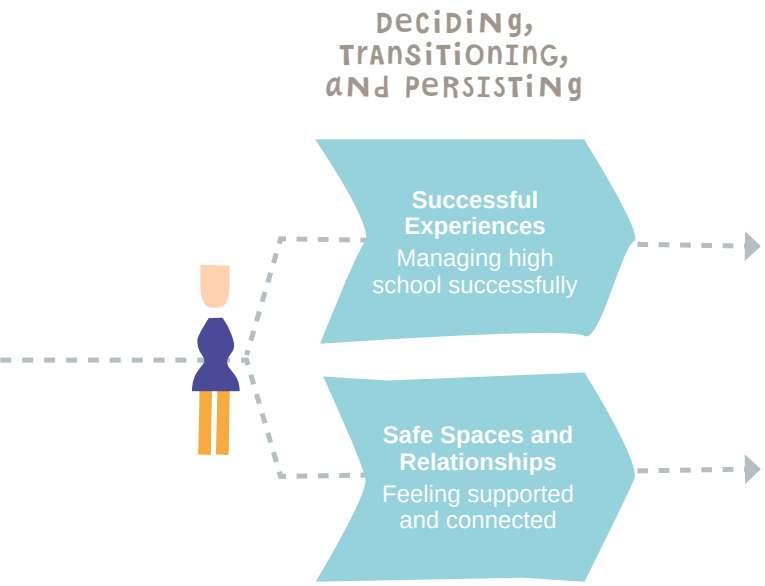
Students are absorbed by their needs for acceptance, connection, and success, and future thinking happens when those needs are met.

"When I get a good grade it's like a huge weight is lifted. It motivates me to want to go to school more."



Student anxiety grows as they discover academic requirements, and they pursue supportive, safe spaces where they feel motivated.

"School is really confusing to me. You can't show your potential at school … I just want to make it out of ninth grade. To make it out of high school."



Students decide on and persist in a place where the "vibe" is right — where their needs for belonging and academic success are met.

"I felt very disheartened on campus. I guess it was something that made me change my mind. When I didn't want to get up in the morning, I'd think about how I could be helping my mom work."

What the secondary research says:

- The research about students leaving college often focuses on the extent to which students are involved with campus life, both academically and socially (Astin 1984; Tinto 1975 & 1993).
- The university environment is a significant mediator for the association between minority status stress and college persistence attitudes (Wei, 2011). Acculturative stress is negatively correlated with persistence among Latino students at community colleges (Wilson, 2012).
- High school grades better predict college outcomes than test scores (Bowen, Chingos, and McPherson 2009; Geiser & Santelices 2007; Roderick, Nagaoka & Allensworth 2006).
- If students enter college with weak skills in math, writing, and especially reading, they will have a very difficult time making progress toward a degree (Adelman 1999 & 2006; Ferguson 2006).
- For teens, a strong social network is one of the biggest predictors they will develop a sense of purpose (Bronk, 2012).
- Many of the challenges that early adolescents face revolve around social status and identity (Steinberg and Morris, 2001; Scales, 2010). They are prone to believe they are less capable than others and lose confidence (Urdan & Klein, 1998).



Throughout their journey, students are driven by who they want to be and become. Student dreams — often rooted in current self-perceptions — provide direction and help students justify why they should put work into school, take a risk on college, or choose a certain path. Being financially stable, happy, successful, and making one's family proud are common dreams. Identity factors related to class, race, or culture are often driving forces behind student dreams. A sense of purpose can sometimes emerge from a student's dreams and identity as a desire to make a difference in the world, to end injustice, or to help others. Because countless external factors such as stress, relationships, difficulty and relevance of coursework, learning environment and process, self-regulation, and agency affect a student's day-to-day motivation, students benefit from developing strong connections between their future dreams and their authentic identity in the present moment. In earlier years, students rely heavily on external support from family and teachers, as well as milestones such as graduation and grades, to stay on track in school. In later years, students wrestle with staying motivated in school on their own. As a result, students who have had powerful formative experiences in their life that solidify who they are and want to be in the world are better able to navigate the challenging decisions regarding how much effort to put into school and which postsecondary path to choose.



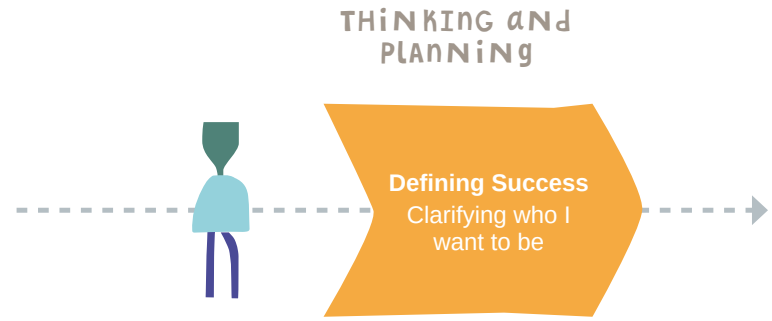
"People tell you do this, do that, but it's about knowing what you really want."

— Arturo, 10th grade



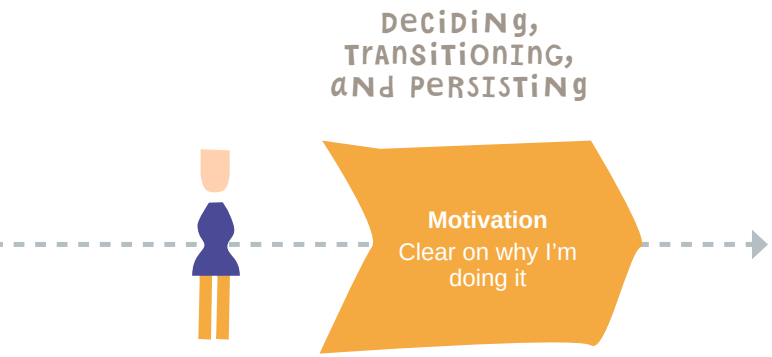
Students dream about the type of person they want to become but struggle to connect their vision with short-term goals.

"I'm proud of where I come from. I want to prove everyone wrong. But if I want to be successful, I have to push myself."



Students begin to clarify their vision and identify what they are interested in, but many feel uncertain and worried, and they struggle to commit.

"When I learn what's going on in society around me, like with immigration, it motivates me more. I want to help people who are struggling."

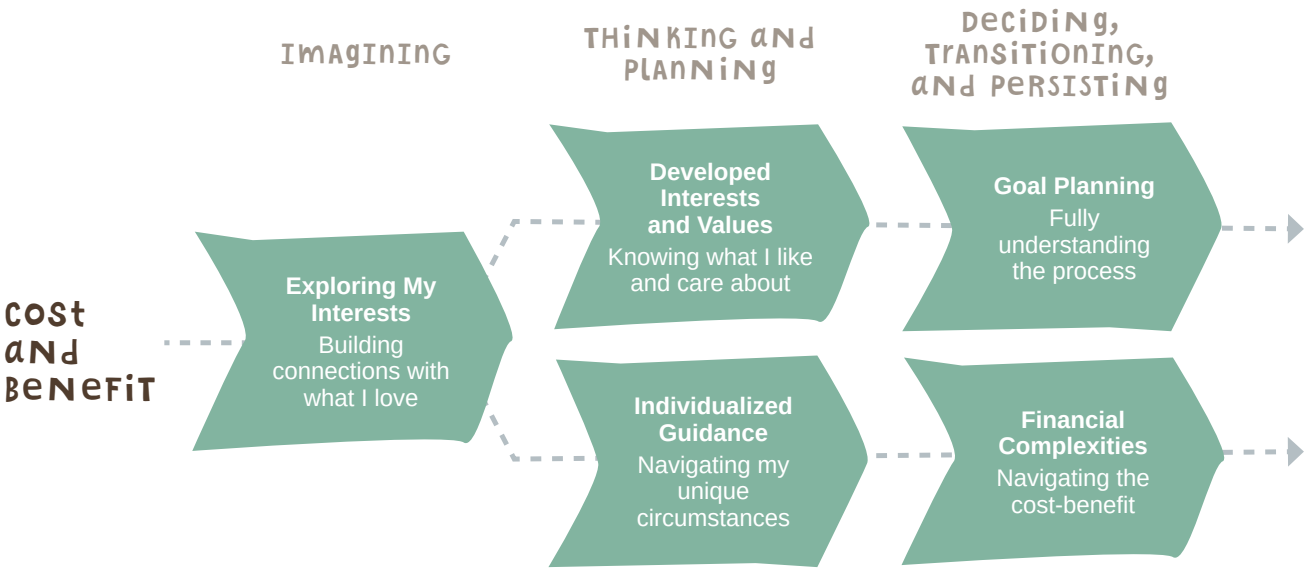


Students, now challenged by being on their own, seek to maintain their day-to-day motivation.

"If there's something I don't want to do, I think of my younger siblings… Every time I think about them, it helps me stay focused."

What the secondary research says:

- "The self-concept has been described as a 'hot' variable linked in thousands of studies to young people's development and well-being in multiple spheres" (Marsh & Craven, 2006)
- In late adolescence, students tend to form an independent sense of who they are and who they want to become. They grow more capable of identifying what they value about themselves, their peers, and family members (Steinberg & Morris 2001).
- "Early adolescents need only to feel they have the will to reach their ultimate aim" (Bronk et al., 2009).
- Encouraging youth to link their daily activities in school or extracurricular pursuits to long-term personal aims is a critical step in fostering purpose (Damon, 2009).
- Early adolescents are just beginning to transition from a self-centered perspective to considering the rights and feelings of others (Scales, 2010). Educators could help students reflect on how their skills could be used to address social needs (Damon, 2008).

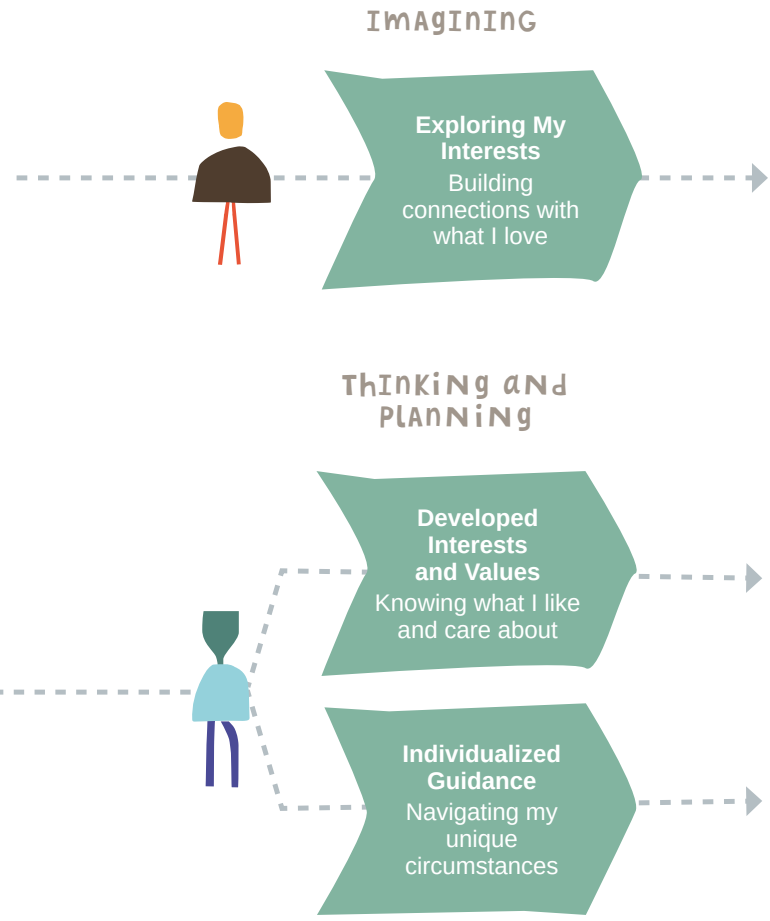


As students get older, they wrestle with the true costs and benefits of their postsecondary decision. In the early grades, students explore their interests and notice things in the real world that connect with their interests. They might have an aspiration to become a veterinarian one day, but students are mostly just imagining what feels right; richness in experiences and exposure to real-world inspiration is what matters, particularly real-world experiences where students can be engaged participants in a collective endeavor. In high school, students start identifying more specific interests, and begin charting a path toward their goals. Most students commit to their academics. However, for many students, uncertainty makes long-term goal-setting difficult. Although long-term financial stability is the primary goal for most, students struggle to develop personal criteria for their postsecondary decision. Most students need to understand their interests in significant depth as they consider potential majors and careers. Individualized guidance becomes a need as students sort through what is true and what is a myth, accounting for "fit," cost, time, effort, location, ability, and risk. As they transition out of high school, students need to have a concrete financial plan and be able to navigate the intricacies of the college application process. The level of knowledge — and comfort with paying for college — is critical. Students who have had the opportunity to iterate on long-term goal planning throughout high school are better prepared to pivot as new situations and needs arise in the transition to independence.



"I want to be someone… but I want to make money faster. I don't know what to do because I'm stuck in the middle. I want to go to college, but I want to work."

— Luis, 11th grade



Students, focused on their current environment, seek to explore their interests and need to develop the seeds of their long-term goals.

"I'm only interested in fun things, like art and film. But everyone is, because no one wants an office job where you sit in an office all day."

Students wonder if they can do their interests as a major or career, need guidance, and hesitate about whether college is "worth it."

"I wonder if I could be an attorney. My dad says you get a lot of power, good money… I don't know if I'm prepared for that. I don't know yet, I'm still searching."

Students weigh their long-term goals against the realities of finances and college logistics and pivot based on new experiences.

"Some other people got the freshman dorm experience, but I got what I wanted: cheap classes, and being able to transfer to one of the best universities and have my name on it."

What the secondary research says:

- Research demonstrates that students make college-related decisions based on a comparison of the perceived benefits and costs (Perna, 2006); however, most students are unable to acquire complete information about the ”product” until they experience it (Winston, 1999). “Inadequate knowledge and information about student financial aid may be a primary explanation for differences between students in their behavioral responses to what might objectively be viewed as similar dollar amount changes in costs and benefits of college attendance” (Avery and Hoxby, 2004; Heller, 1997).
- Students with clear academic and career goals are more likely to persist than those who have not articulated their goals. Early identification of a major is also related to college retention (Hagedorn, Maxwell, and Hampton, 2001-2002; Leppel, 2001).
- Participants in internship programs have higher rates of high school graduation and lower rates of failure in courses (George et al. 2007).
- Early adolescents have wide, evolving interests and are eager to learn about topics they find interesting, useful, and personally relevant (Brighton, 2007).
- “Extracurricular activities and other ‘expanded learning opportunities’ outside of school offer fertile ground... particularly when they encourage young people to become reliable, engaged participants in a collective endeavor… 16 studies that found such programs to have positive effects on academic achievement, college-going, and health outcomes” (Bowles and Brand 2009).

For additional information on the four strands and the drivers, in addition to printable resources for educators, please see Appendix D.

Implications for K-12

Implications for K–12

Our research found that the seeds of college persistence are sowed long before 12th grade and are particularly influenced by the ways students experience their schools, their families, their dreams, and the cost and benefits of college. The most important themes emerging from our research are below. We recommend that program designers and K–12 educators use these themes to provide intentional supports along students' journeys.

1

To improve college access and persistence, we must design our school and support systems to propel students along each phase of the journey and address all four strands of needs.

For years, our K–12 and college systems have struggled to improve college-going and postsecondary graduation rates. The journey and four strands of needs identified in our research serve as a roadmap for program design and continuous improvement efforts. Further, the findings illuminate why a focus on college process logistics such as FAFSA, ACT/SAT, application deadlines, etc. will remain necessary but insufficient, especially for our students of color and those from low-income families. We must develop a student experience that supports young people throughout their journeys: from the phases of Imagining to Thinking & Planning to Deciding, Transitioning, Persisting. We must provide opportunities for children and young adults to continually re-assess how all four strands (Family and Support, School and Belonging, Dreams and Identity, and Cost and Benefit) interact in support of their goals.

2

Families and schools must align on expectations and provide collaborative support during the Thinking, Planning, and Deciding phases.

Although teachers and schools have important roles to play to set students up for college success, most students rely on the people in their immediate and extended family to guide them to and through college. For K–12 schools to be able to have an impact on college persistence and completion, the student's family needs to be at the center of conversations as expectations are set, criteria and values considered, cost-benefit analyses completed, and goals created.

3

Students need a clear view into the world beyond high school.

There are few opportunities for high school students to understand or project what life will be like after high school graduation, which makes it difficult to fully understand the costs and benefits of various postsecondary choices such as four-year college, community college, or going straight to the workforce. Students need to be empowered with the 1:1 guidance and tools required to navigate this postsecondary decision, along with experiences that give them the depth of world-knowledge, self-knowledge, and college-knowledge necessary to choose well. For students who are struggling to forecast their needs and wants,

opportunities to see past the walls of the classroom — opportunities such as internships, job shadows, and college tours — could be the most effective way to address this core need, particularly when followed by guided personal reflection.

4 Younger students need to deepen their identity and interests in order to be ready for complex decision-making.

Students need to discover their unique vision, strengths, interests, and values to navigate their journey successfully. Since a high school GPA is critical for access to high-quality colleges, students also need to develop a college-going identity before they reach 10th grade. It is not enough just to talk about the long-term financial value of college with students; needs across all four strands drive a student's ultimate decision as to whether or not to invest in attending college.

Designing for Learning Environments: A Self-Diagnostic Tool

Below are seven questions that schools and support organizations can use to help diagnose and guide the design of their programs to propel students along the college journey and ensure students' needs are met. Although most of these strategies and resources are not new ideas, we hope that these findings help put them into context: when they should be applied, how they might be best implemented, and why we need them now.

? Does our school/program ensure families, students, and teachers have clear, shared expectations for the student about the college journey at each stage of the journey?

In the early grades, we recommend the student, families, and their teachers establish a regular cadence to develop and refine shared expectations about college and how they want the student to approach preparing for their future. If a four-year college is the goal, schools must offer education about college for many families in order to leverage the power of their support. In the later grades, the family-student-teacher conversations should shift to continuously re-assessing the commitment to college in the face of a variety of cost-benefit analyses. To support this ongoing re-assessment, the development of college criteria should be done in partnership with families as this allows parents to continue to provide support aligned to the student's goals after the student graduates high school. Throughout the journey, it is beneficial to provide structures for parents, guardians, siblings, cousins, teachers, best friends, and role models to weigh in on a student's goals and options so that the collective plan reflects the strengths and values of the student's personal support network.

See Appendix A for a description of our "Personal Advisory Board" structure for schools, which supports a team approach to students' future planning.

At our school/program, are there proactive support structures for individualized student guidance?

Depending on the type of family involvement in your school community, this might not be a need for every student on the college journey. However, this could mean investing in more college counseling or mentoring to ensure that students can talk through their unique contexts in a 1:1 setting. This need only grows over time, as students navigate the challenging college process. Students also need someone who is their true champion and helps them embrace and discover their personal vision — not someone who simply evangelizes college. Students will struggle to persist when they do not believe in their vision for the future.

See Appendix B for a description of our "Oral Defense" structure, which empowers students to lead their self-reflection and future planning process in a supportive community.

Is identity exploration an intentional part of the program/curriculum?

In the early grades, identity exploration means exposure and experience, including personal exploration around race, family, and culture while students debate their beliefs and discover who they might like to be; in later grades, this means supporting students as they define success for themselves and get clear on *why* college and for *what*. Throughout, programs should provide a place for students to examine values and personal growth goals, and to connect the real world with their individual and social identity.

At our school/program, are students able to regularly explore their authentic interests?

In early grades, this means facilitating opportunities for students to explore their most authentic interests and develop new ones; in later grades, this means students deepening and developing their interests enough that they can navigate difficult decision-making and long-term goal setting. Programs should provide first-hand exposure to real ideas, places, careers, and role models that drive inspiration and knowledge in an experiential way. Students with less challenges may not need a clear long-term goal; however, other students without a meaningful, lived experience of their goals may struggle to persist in college.

Does every student have the mindset that college could be for them, based on an authentic experience of success within the school environment? If not yet, in what ways could our program improve differentiation and supports for students so that they can experience success?

In early grades, the experience of success in any area of life (whether it be the classroom, extracurriculars, clubs, or leadership roles) inspires students to build self-efficacy and to imagine their future; in later grades, it becomes most important to ensure that the content of students' academic experience is inspiring, relevant, and confidence-building. Students persist in college when they are happy and successful at school, and programs which intend to increase college persistence should pay attention to whether students see learning as a positive experience, in which increased effort is linked to authentic success. A curriculum

that is intentionally scaffolded and multi-modal, such as the **project-based learning curriculum** used at Summit and other schools, is one way to support success in school for every student.



To what extent does our school/program prepare students for future experiences of belonging?

In their journey, students will need to select a best-fit college environment, develop social supports, integrate into a new environment, and navigate situations where they do not feel like they belong. Students will gravitate toward postsecondary situations where they feel the greatest sense of belonging and connection, which affects both college access and persistence. Schools can structurally support a sense of belonging through community- and impact-oriented projects and by helping students develop a community of advocates for their future plans. During the Thinking and Planning phase, schools can facilitate connections between students and individuals in their field of interest through informational interviews, job shadows, or volunteer opportunities. In the Deciding phase, schools can ensure that students visit campuses, know how to integrate into a college community, or cope with failure.



Does our organization support families with the details of the college process and financial decision-making?

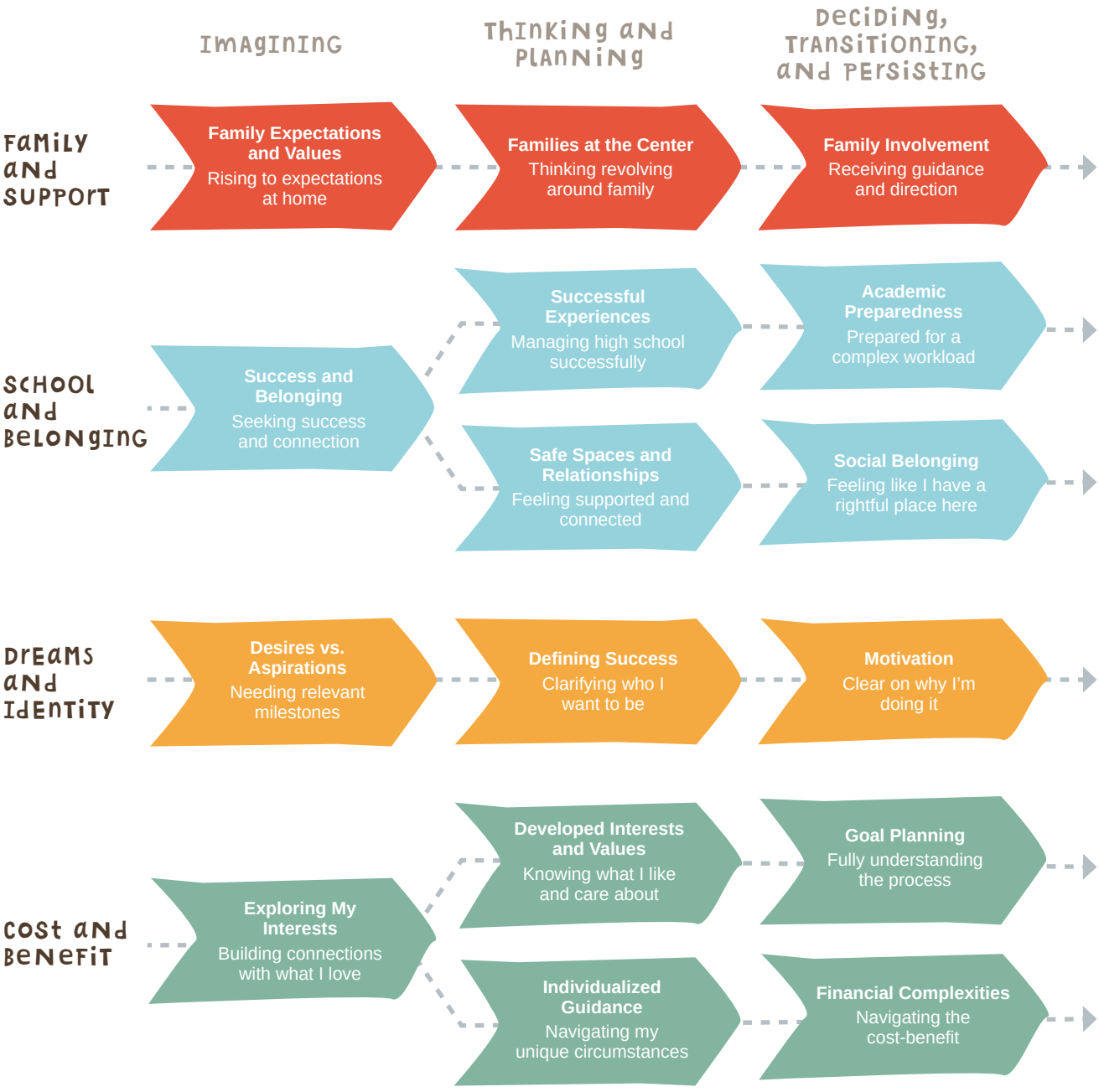
In early grades, the cost-benefit related to college persistence is relatively unimportant — students need to explore and discover their interests, and families need to be informed about the path ahead. In later grades, students and families need significant knowledge about process requirements and logistics. Programs should empower students and families with enough just-in-time information to make wise decisions, and faculty should be knowledgeable enough to ensure that information is delivered. Students greatly benefit from understanding the requirements and needs along their journey.

See Appendix C for a description of a potential "Best Fit Checklist" structure for schools.

Conclusion

For educators looking to better clear the path for students, we recommend leveraging the driver framework to brainstorm and design solutions to meet the needs of students at each stage of their journeys:

The Driver Framework



Each of the four strands provides a different insight into why our education system fails to equitably serve students for life after high school. For example, we might say that *students struggle to navigate to and through college because their families are struggling to navigate college with their students*. Looking through the lens of Family and Support, it becomes clear that schools must create joint expectations with families early and work in partnership with them throughout a student's school experience.

Alternately, we might say that *students struggle to navigate to and through college because they do not feel successful or that they belong at school*. Through this framing, we need to focus our efforts on creating more successful, inclusive, and supportive academic experiences in both high school and college, knowing that students need to believe that investing in school is worth the effort.

Overall, we attempt to capture the complex ways that a student's internal and external environments influence their behaviors and choices throughout their journey. Efforts to meaningfully address low enrollment, retention, and graduation rates for historically underserved students must focus on meeting all the needs and challenges at each phase of the driver framework. Although not every student experiences every need or challenge in each phase, we must develop the capacity to intervene when a need is present. We are hopeful that these findings can be used by educators seeking solutions for their students, families, and communities.

APPENDICES

The appendices that follow represent three structures and assessments we piloted at Summit Public Schools in 2017–18 and 2018–19 and found to be effective. We share these with the intent of providing ideas on how to operationalize this research in a public school setting:

Appendix A: The Personal Advisory Board
Appendix B: The Oral Defense
Appendix C: The Best Fit Checklist

Additionally, we have included:

Appendix D: Printable Resources for Educators
Appendix E: Research Methodology

Appendix A

The Personal Advisory Board

Why a Personal Advisory Board?

It is a structure to:

- Help students seek and access mentors beyond their teachers
- Help students build social capital beyond their family connections
- Help students learn how to build a support system both during and after high school
- Provide an authentic way for the people who are most influential in students' lives to engage with them in their purpose development and exploration and selection of their next step.

What Is a Personal Advisory Board?

The Personal Advisory Board (PAB) is composed of people who most influence the choices a student makes during and after high school. These advocates might include key family members, peers, teachers, and other community role models. The PAB includes at least the following three individuals:

- **Academic Advisor:** A student's teacher who has a close relationship with the student. This member engages in 1:1 academic mentoring with the student throughout their high school experience.
- **Financial Advisor:** A close family member of the student on whom they are financially dependent. Often, students' values are born from family connections and their postsecondary decisions are linked to finances, so it is also key to have a family member involved.
- **Confidant:** A close friend, peer, or family member of the student who can speak to the student's overall personal well-being. Ideally, this is someone whose opinion the student considers and trusts on a deep level.

We support students to curate a Personal Advisory Board of these important advocates in grades 8-12 and to engage this advisory board at critical times throughout the student's experience at school and in transitioning to their next step.

Role of the Personal Advisory Board

The role of the Personal Advisory Board is to dedicate intentional 1:1 time to converse with the student about the following topics and act as an advisor:

- Identify their sense of purpose and identity
- Understand paths to apply their purpose in their life both during and after high school
- Consider a variety of purpose-driven future plans
- Consider the necessary prerequisites of their plans
- Consider obstacles they will encounter in pursuing their plans and ways to overcome those obstacles
- Connect to new sources of social capital
- Collaboratively support the student in deciding on a concrete next step to pursue with the rest of the Personal Advisory Board.
- Take into account financial implications, a student's values/purpose/identity, family considerations, academic preparedness, anticipated obstacles, etc.
- Evaluate and attend the Oral Defense
- Commit to support the student in pursuit of their next steps

Appendix B

The Oral Defense

Why an Oral Defense in Front of the Personal Advisory Board?

It is a structure to:

- Ensure all the people who influence a student's life decisions are collaboratively helping the student decide on their next step together, as opposed to each sending the student a different message (e.g., a teacher pushes 4-year college, a family member pushes 2-year college, a peer pushes to get a job, etc.)
- Ensure the student considers a variety of decision-making criteria when choosing between their next step options
- Avoid bias (racial, value judgments, etc.) in evaluating the viability and authenticity of a student's next step

What Is the Oral Defense?

For 12th grade, the Oral Defense is a 45- to 60-minute presentation and discussion between the student and the student's Personal Advisory Board that culminates in the selection of one out of a student's multiple next step options and the commitment by the Personal Advisory Board to support the student's persistence with that option. For grade 12, the Oral Defense occurs in April to ensure it directs the student's subsequent enrollment in post-graduation next steps. If the student and the board cannot reach consensus and commitment, a follow-up Oral Defense will be scheduled for the board to meet again and discuss options moving forward.

For grades 8–11, the Oral Defense occurs at the end of the school year during round 4, in preparation for the following school year. The defense is a 10- to 15-minute presentation and discussion that occurs during class time. Students sit on each other's panels, and Personal Advisory Board members are invited to attend. Students focus on the path that they plan to take over the course of their high school career to reach their long-term aspirations.

Oral Defense Agenda

5 min	Welcome!
10 min	Oral Defense Presentation Given by Student
20 min	Discussion with Personal Advisory Board and Student
5 min	Personal Advisory Board Deliberation and Recommendations
5 min	Personal Advisory Board Shares Recommendations with Student
2 min	Adjourn

Appendix C

The Best Fit Checklist

Has the student selected a next step that is a best fit for them?

		Yes	No	Considerations
1	**Goal Planning:** Does the student's next step truly align with their long-term goals?			Do their long-term plan and needs require this next step? Is their next step aligned with their authentic interests? Do I expect their goals to change? If yes, how would that affect their next step decision?
2	**Financial Complexities:** Will the student's investment in their next step pay off in future earnings?			Is this next step worth it? Is there a cheaper and better way? Are they clear on their financial plan? Are they comfortable with their financial plan?
3	**Academic Preparedness:** Is the student academically prepared to access and thrive at their next step?			Do they have the skills to succeed at their next step? Are they confident in their ability? Are they able to self-direct and manage the work?
4	**Family Involvement:** Will the student's family and friends support them with their next step?			Do they have obligations at home or otherwise that would interfere with persisting at their next step? Are they aligned with family on their decision? Is family actively involved in supporting the student?
5	**Sense of Belonging:** Is the student's next step a place they will truly like and belong?			Can they picture themselves there? Is it the right distance from home? Can they navigate the social environment?
6	**Motivation:** Is the student deeply motivated to work toward their long-term goals?			Have they "tried on" their long-term goals before? Are their long-term goals aligned with their purpose and values?
7	**College/University Track Record:** If college is the next step, is it one that has been successful at supporting students like this student?			Does this school have published graduation rates of at least 50% or higher for students who look like the student? Does this school have a published average debt load less than $30K for a degree? Does this school have supports for first-gen students?

*It is normal for a student not to have "yeses" in all seven categories. However, the more "yeses," the better the fit and the higher likelihood that the student will be happy there and able to persist.**

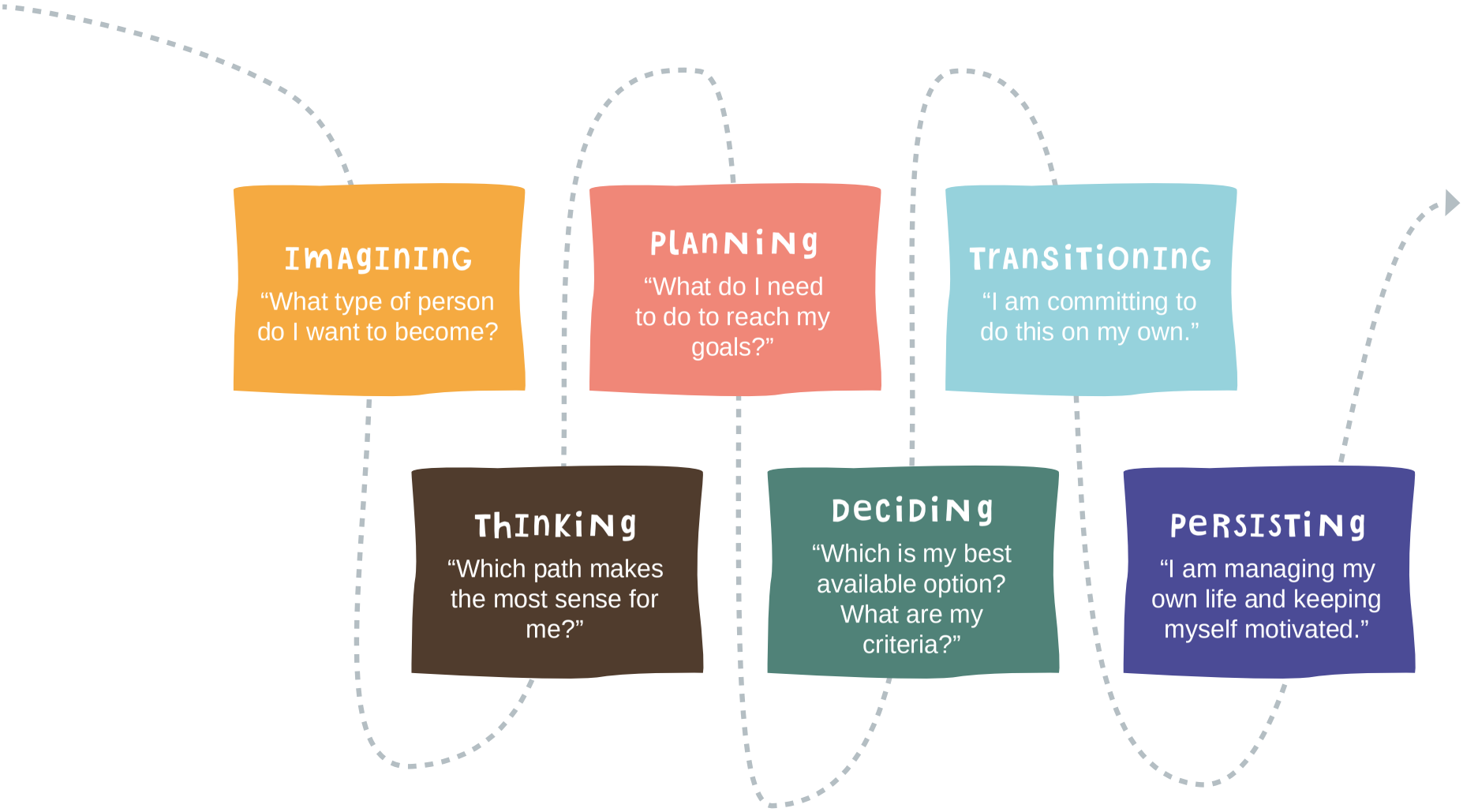
Appendix D

Printable Resources for Educators

The following resources are designed for educators to print and use in their work with students. These resources include:

- Graphic: The Journey To and Through College
- Graphic: The Four Strands
- Graphic: Driver Framework
- Table: Student-Level Diagnostic Tool

The Journey to and Through College



Summit Public Schools

The Four Strands

Family and Support

What kinds of involvement am I receiving at home?

Expectations / Values / Support / Role Models / Involvement

Dreams and Identity

Why do I work hard? Who do I want to become in the future?

Vision / Impact / Purpose / Pride / Power / Race / Class / Mindsets



School and Belonging

What do I need from my experiences at school?

Success / Community / Connection / Agency / Preparedness

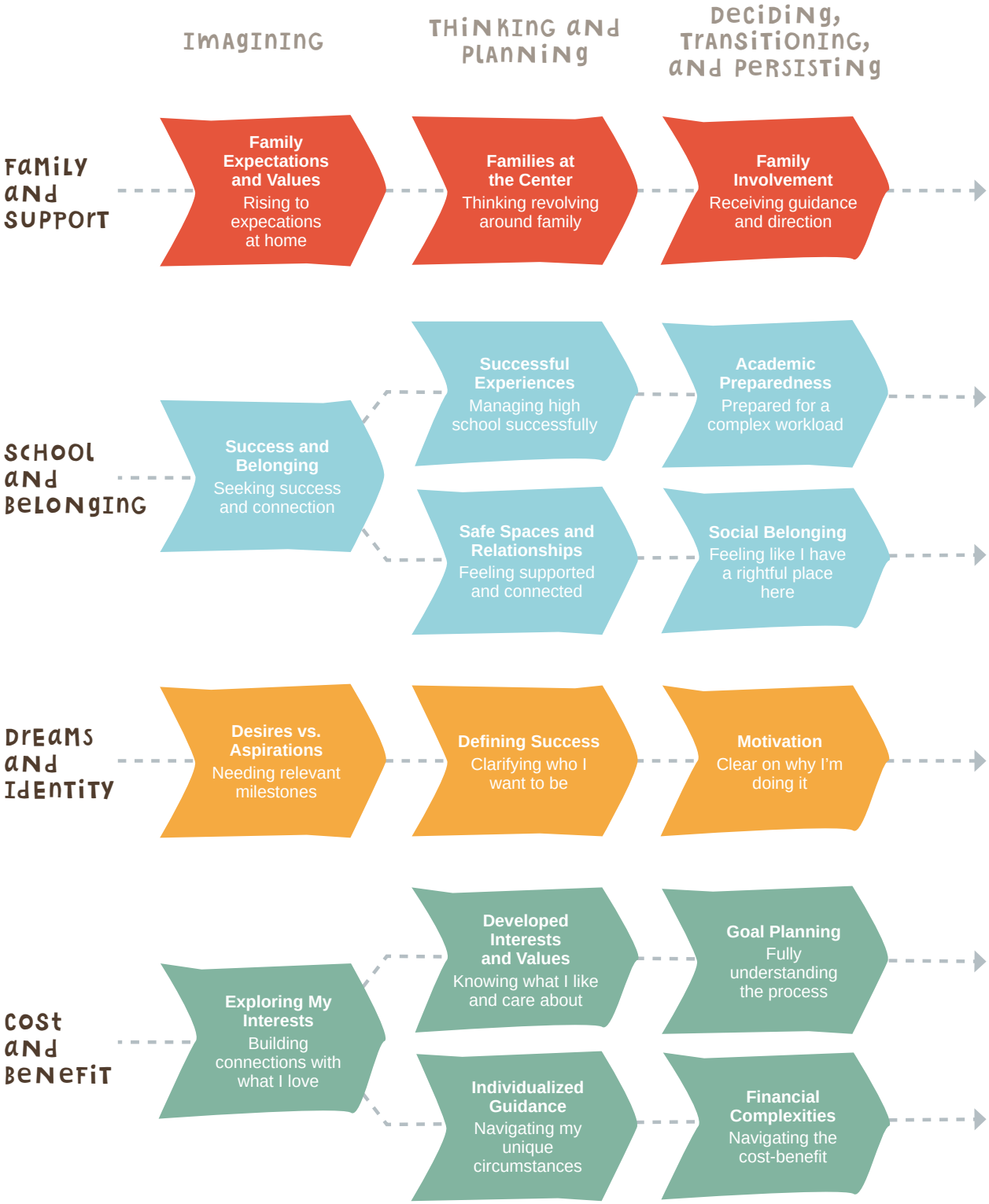
Cost and Benefit

What do I like to do, what are my goals, and how do I get there?

Finances / Planning / Guidance / Interests / Exploration

Summit Public Schools

Driver Framework



Summit Public Schools

Student-Level Diagnostic Tool

Organized by phase of the journey

Imagining (~6th–9th Grade)

Family and Support

Students envision their future relative to the impact it will have on their family, and the expectations and examples that are set.

Driver: Family Expectations and Values

When the driver is met, it sounds like:

- Meeting my family's expectations and feeling motivated by them
- Making my family proud
- Getting emotional support and ideas from my family
- Representing and embracing my race and culture
- Wanting to be like my older siblings, cousins, or parents
- Proud to be the first to go to college in my family
- Motivated by wanting to take care of my family one day and give back to them
- Getting good grades and staying on track to college because of strict rules at home

When the driver is unmet, it sounds like:

- Not having a role model or someone to look up to
- Distant or strained relationship with family
- Too much stress and falling behind at school
- Parents who aren't focused on my education

Success and Belonging

Students are absorbed by their needs for acceptance, connection, and success. Future thinking happens when those needs are met.

Driver: Success and Belonging

When the driver is met, it sounds like:

- Feeling accepted for who I really am at school
- A supportive, safe, fun community
- Emotional support if I'm struggling
- Getting good grades; passing assessments, keeping up, getting ahead so I can relax
- Feeling successful
- A calm environment where I can focus but be with friends
- Making new friends and spending time with people I'm closest with

When the driver is unmet, it sounds like:

- Other students seem disrespectful/fake
- Managing the workload is complicated and consuming
- Struggling with stress, anxiety, and falling behind
- Bored at school, not enough breaks
- Too much bullying, judging, put-downs, and drama
- Feeling lazy and not motivated to get grades up
- Distracted by noise, people, talking in class too much
- Needing more support from teachers
- School too easy or too hard

Dreams and Identity Students dream about the type of person they want to become but struggle to connect their vision with short-term goals.	**Driver: Desires vs. Aspirations**	
	When the driver is met, it sounds like: • Having dreams about the type of person I want to be: respected, happy, powerful, helpful, etc. • Having basic goals, like not having to worry about bills when I'm older, having a big house, or getting a job I like • Developing empathy for others, wanting to make a positive impact on the world • Wanting to live up to my family's expectations	**When the driver is unmet, it sounds like:** • Long-term aspirations aren't translating into motivation • There's no decision I have to make right now; my goals feel vague and meaningless • Not sure if college will be too hard • Haven't really thought about why college or why career before
Cost and Benefit Students dream about the type of person they want to become but struggle to connect their vision with short-term goals.	**Driver: Exploring My Interests**	
	When the driver is met, it sounds like: • Learning experiences that are relevant and hands-on, or are about people like me • Having time to do what I truly love and enjoy • Curious to try new things and find what I'm good at • Teachers who are fun and inspiring • Expressing myself by doing art, writing, and reading • Activities, like singing, dancing, martial arts, swimming • Inspired to play sports at the college or professional level • Having clubs where I do things I'm interested in with my friends • Playing sports, video games, and being with friends or family	**When the driver is unmet, it sounds like:** • Nothing I am passionate about or inspired by • Bored just sitting in a seat all day; no time outside; on computers a lot • Class isn't dynamic enough • Need more freedom and ways to express myself

Thinking and Planning (~10th–11th Grade)

Family and Support Students think about plans for life after high school based on role models and what they think their family would be able to support.	**Driver: Families at the Center**	
	When the driver is met, it sounds like: • Getting my parent's advice and their support about my next steps • Having a plan to achieve independence and being able to support myself • Making my family proud • My parents supporting my interests and my motivation • Having a consistent home situation and basic needs met	**When the driver is unmet, it sounds like:** • Parents aren't sure how to guide me or wouldn't understand • Parents busy or unaware of my plan, wanting more advice from them • Don't know my family's financial situation so I'm not sure if I can go to college • Having an unstable or chaotic home life making it hard to focus at school or think about my future • Parents want something different for me • Getting confusing messages from different sources (peers, teachers, families)
Success and Belonging Student anxiety grows as they discover academic requirements, and they pursue supportive, safe spaces where they feel motivated.	**Drivers: Successful School Experiences; Safe Spaces and Relationships**	
	When the driver is met, it sounds like: • Feeling good about my GPA • A quiet environment conducive to focusing • Managing stress about SAT/ACT prep and AP classes • Having enough time to finish the college application process • Feeling connected and safe in my school community • For teachers to truly help me and check in with me • Maintaining "real" friendships; not having fake friendships • Teachers care about the real me and I "click" with them • A mentor I can relate to, trust, have a relationship with • Liking the high school experience • Doing well in school (and my parents aren't mad at me)	**When the driver is unmet, it sounds like:** • Not seeing why this matters • Just want to get to graduation and get out of there • Not feeling smart enough • Work is hard or too much • Sleepy, overextended, stressed, irritated, anxious, pressured • Struggles outside of school making it hard to focus on school • Drama and bullying • Hard to relate with everyone • No one I can truly rely on • Can't focus; always tempted to mess around

Dreams and Identity

Students begin to clarify their vision and identify what they are interested in, but many feel uncertain and worried, and they struggle to commit.

Driver: Defining Success

When the driver is met, it sounds like:

- Having a plan to be able to live on my own and sustain myself as an adult
- Being committed to supporting my family or siblings financially and emotionally
- Having a clear definition of success: to achieve something greater than my current situation, to have a good life, etc.
- Wanting to have a successful career, earn money, or be a respected person

When the driver is unmet, it sounds like:

- Wanting to be happy but unclear/ uninformed about my rationale for college
- Feeling concerned that I can actually do it
- Hard to connect a future to my current situation
- A lot of people in my community get "stuck" around here
- Not feeling inspired
- Overwhelmed by life and school
- My real passion has a lot of contingencies to do it
- Unsure how to motivate myself
- Thinking about my future makes me overwhelmed

Cost and Benefit

Students wonder if they can do their interests as a major or career, need guidance, and hesitate about whether college is "worth it."

Drivers: Developed Interests and Values; Individualized Guidance

When the driver is met, it sounds like:

- Understanding what it takes to do my interests as a career
- Finding a passion that interests me, and/or deep exploration of majors and careers I like
- Going deep enough into my interests that I can plan
- Finding a balance between my desire for financial stability and what I actually like
- Learning about the real world — understanding my goals in depth
- Adults understand and listen, not just push
- An individualized plan that includes logistics but also dreams
- Knowing the cold, hard facts — having a reality check
- Breaking things into smaller bits
- Knowing my own needs, strengths, weaknesses

When the driver is unmet, it sounds like:

- Confused if there's an easier or cheaper alternative than college
- Don't know if I'll like college or if it's worth the effort
- Not knowing what something would feel like as a career day-to-day
- Having limited knowledge about the process to get to my goals
- Haven't been exposed to anything that interests me
- Hearing stories and am not sure if I can believe them
- Not sure what options even exist for me, given GPA, personal criteria, or family situation
- Not sure when the decision actually needs to happen
- Teachers don't have bandwidth or time to help me

Deciding, Transitioning, and Persisting (~12th grade–Alumni)

	Driver: Family Involvement	
Family and Support Students look to their family unit for support and need family involvement to be helpful, productive, and aligned to the student's own goals.	**When the driver is met, it sounds like:** • My parents engaging in my thinking and planning for life after high school • My parents serving as a resource and motivation • My family providing emotional support for me • A plan that allows me to stay close, contribute financially, and support the family • Family members and role models guiding my planning	**When the driver is unmet, it sounds like:** • Not understanding how my college decisions impact them (emotionally, financially) • Too much pressure and expectations from my parents • Not enough alignment between my goals and my parents' • Not having someone I trust for help and direction • Parents not having access to information about the college process or resources • Being first in my family to go to college is a lot of pressure
	Drivers: Academic Preparedness; Social Belonging	
Success and Belonging Students decide on and persist in a place where the "vibe" is right — where their needs for belonging and academic success are met.	**When the driver is met, it sounds like:** • Having a GPA and test scores that get me into a college that I am proud of • Ready for college-style learning, assessments, curriculum • Feeling confident in my skills • Knowing how to ask for help in a variety of circumstances • Having someone to keep me on track and support me with my work • Finding a college that has the right feeling on campus, where I can "see myself" • Feeling supported by my community and confident that I belong there • Making meaningful friendships at school • Getting emotional support from family while I'm away • Having the college experience; the dorms and cafeterias • Finding a diverse community at college	**When the driver is unmet, it sounds like:** • Lack of preparation on how to study for midterms, manage workloads, meet deadlines • Not enough practice with fundamentals needed to access college-level math and science • Feeling like me against the world • Nervous and afraid to leave my community • Not feeling connected or supported by people

Dreams and Identity

Students, now challenged by being on their own, seek to maintain their day-to-day motivation.

Driver: Motivation

When the driver is met, it sounds like:

- Setting a good example for my younger siblings
- Motivated by becoming financially stable, wanting to support my family, making them proud
- Feeling committed to finding a job that I like
- Having someone to support me with staying motivated as things get hard
- Having real experiences that motivate me to work hard and give me a vision for my future
- Seeing the connection between what I want to do and what I am doing right now at this moment
- Someone to serve as a role model of what success is

When the driver is unmet, it sounds like:

- Not having a clear vision for my future
- Having to take classes that I'm not good at or interested in
- Overwhelmed by my home life or other responsibilities
- Not motivated by schoolwork because it isn't relevant to me
- Not feeling supported to grow or be successful at school

Cost and Benefit

Students weigh their long-term goals against the realities of finances and college logistics and pivot based on new experiences.

Drivers: Goal Planning; Financial Complexities

When the driver is met, it sounds like:

- Not having debt, being financially stable, having a plan
- Knowing how much my family can actually pay
- Proud of the reputation of my college choice
- Understanding the implications of my loans and bills
- Confident in navigating the financial aid process
- Having an actionable long-term goal that supports my decision-making
- A deep enough awareness of what potential careers are like and their requirements
- Individualized support from adults during the logistics and planning process
- Knowing how to seek out the right information so that I can strategy shift independently

When the driver is unmet, it sounds like:

- Not sure how much to spend on general education requirements
- Long-term goals are changing, earning potential is unclear
- Confused by FAFSA, securing aid, completing paperwork
- Not having sensitive financial conversations with anyone
- No conversations with parents about money
- Feeling very worried about paying back loans
- Having a disconnect between goal and reality (i.e., current GPA and GPA for target college)
- Not having options that align with my goals
- Needing less stigma around non-4-year options so I can get more support

Appendix E

Research Methodology

12th Grade and Alumni Research

Research Questions:

1. What accounts for the drop-off from high school graduation to college enrollment (melt) to college graduation (persistence) for SPS alumni, and how might those drop-offs be reduced? What are the similarities and differences compared to non-SPS students?
2. What are students' decision-making and planning processes during their senior year and as they transition to their Concrete Next Step? How could we better support them in their Concrete Next Step?

Qualitative (Primary):

Conducted 120 30-minute interviews with:

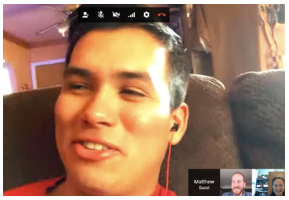
- 43 Class of 2015–Class of 2017 alumni
  17 2-year, 18 4-year, 8 working
- 11 Class of 2018 senior students primarily from low-income families with GPAs between 2.0-3.0
- 7 Summit Learning Program seniors (Blackstone Valley Prep in Rhode Island and St. Regis in Montana)
- 3 Leadership Public Schools (Charter Management Organization in Oakland) alumni
- 16 Summit seniors primarily from low-income families and with GPAs between 2.0-3.0
  Including follow-up interviews with 11 seniors during July and October of their freshman year of college
- 16 parents of senior students and alumni
- 16 subject matter experts in the field of college enrollment and success
- 23 faculty members (mentor teachers, college readiness teachers, school leaders)

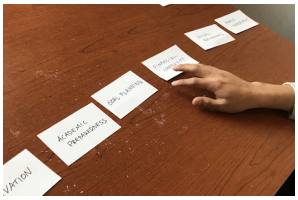
Quantitative:

- Analysis of senior exit surveys, student surveys, and alumni surveys from Class of 2015 through Class of 2018
- National Clearinghouse analysis
- Analysis of senior May 2018 exit survey
- Regression analysis of leading indicators of college persistence from Year 1 to Year 2

Secondary:

- ACT's Class of 2017 "summer melt" research from May - October 2017, including 1 in-person and 1 remote interview and 9 surveys with up to 86 Class of 2017 students who were targeted as high risk of melt
- Literature review





10th–11th Grade Research

Research Questions:

1. What are the needs and challenges of 10th and 11th graders as they consider their purpose and develop their next steps?

Methodology:

- Conducted 37 interviews with:
  - > 22 students
    12 10th Graders
    10 11th Graders
  - > 15 adults
    5 10th/11th Grade Mentors
    6 10th/11th Grade Parents
    4 10th/11th Grade Pilot Program Teachers
- Secondary literature review

6th–9th Grade Research

Research Questions:

1. What do sixth through ninth grade students need in order to develop their dreams and thoughts about their future?
2. What are the hopes, dreams, curiosities, and sources of joy of sixth through ninth grade students?

Methodology:

- Conducted 59 interviews with:
  - > 45 students:
    6th Graders (9)
    7th Graders (12)
    8th Graders (12)
    9th Graders (12)
  - > 14 mentors and parents
- Secondary literature review

Participant demographics for our research are included on the following page.

Participant Demographics

6th–9th Grade	10th–11th Grade	12th Grade–Alumni
Gender • Male: 52% • Female: 48% **SED** • True: 55% • False: 45% **Other** • EL: 11% • SpEd: 9% **Reported Race/Ethnicity** • Hispanic: 41% • Black/African American: 16% • White: 16% • Asian: 9% • Two or more races: 4.5% • Indian: 4.5% • Pacific Islander: 2% **Average Course Score** • <70%: 18% • 70-80%: 18% • 80-90%: 27% • 90-100%: 27%	**Gender** • Male: 60% • Female: 40% **SED** • True: 70% • False: 30% **Other** • EL: 20% • SpEd: 15% **Reported Race/Ethnicity** • Hispanic: 50% • Black/African American: 15% • White: 10% • Two or more races: 10% • Asian: 5% • American Indian: 5% • Pacific Islander: 5% **GPA** • <2.5 GPA: 50% • 2.5-3.0 GPA: 40% • >3.0 GPA: 10%	**Graduating Year** • Class of 2016: 36% • Class of 2017: 34% • Class of 2018: 29% • Class of 2013: 2% • Did not graduate: 2% **Enrollment Status** • 4-year college: 32% • 2-year college: 30% • No college/working: 12% • Vocational: 4% • High school senior: 22% **SED** • True: 32% • False: 68% **Other** • EL: 12% • SpEd: 13% • RFEP: 31% **High School GPA** • 25% <2.5 GPA • 27% 2.5-2.9 GPA • 25% 3.0-3.4 GPA • 20% 3.5-3.9 GPA **Reported Race/Ethnicity** • Hispanic: 61% • Asian/Pacific Islander: 17% • Black/African American: 5% • White: 15% • Two or more races: 3%

Qualitative Synthesis Process

1. During interviews with students, teachers, and parents, we took note of needs, challenges, and opportunities that each participant expressed or experienced; we also recorded any insights that we had during the conversation.
2. After each set of interviews (~5-10), we disaggregated each of the students' needs, challenges, opportunities, and insights into individual sticky notes to capture each need separately.
3. Through affinity mapping, we categorized the sticky notes into larger themes. As we added data, narrowed them down to the most salient, and became sure of their role in a student's journey, we began identifying them as "drivers."
4. Emerging drivers in hand, we validated them outside the cross-functional core team, including teachers and school leaders, to see how they resonated with our stakeholders.
5. Once the drivers were set, we:
    - Finalized definitions for each to capture the essence of the driver and transferred to a final deck;
    - Sorted the stickies *within* each driver to identify overlapping types of need or challenges that were valid across the population (for example: making my family proud) and transferred these needs to a final deck as individual bullet points. Needs that were expressed by just 1-2 participants were not transferred.

Quantitative Synthesis

1. To understand the impact of various decision points along the journey (Thinking, Planning, Deciding, Transitioning, and Persisting), we looked at National Clearinghouse Survey data, senior exit surveys, and reports from Naviance and current mentor teachers. Through this process, calculated the percent of Summit's graduating class who ended up changing their mind or being forced to reassess their decision during each stage of the journey.

Socializing Insights

Leveraging findings, our team also facilitated workshops with cross-functional teams of Summit faculty, teachers, and school leaders to build empathy and awareness in the organization and ideate on potential solutions for the organization. This involved:

- Empathy mapping
- Scenario building
- Archetypes/Proto-personas
- Journey mapping for each user archetype
- Generating "How Might We" questions from pain points
- Validating of insights with teachers

Acknowledgments

External Research Participants

Dr. Ben Castleman, University of Virginia

Jess DeCarolis, Vermont Flexible Pathways Initiative

Patrick Deegan-Cook, Project Wayfinder

John Fanning, Aspire Public Schools

Dr. Omid Fotouhi, Stanford University

Vaibhavi Gala, Camp Imagineerz

Bryant Gomer, Career Village

Teshika Hatch, Jumo Ventures

Ryan Hoch, Overgrad

Eun-Mee Jeong, Eastside College Prep

Tim Klein, Project Wayfinder

Juan David Lozana, Excel Academy

Jeff Manassero, Concourse

Jeff Nelson, OneGoal

Adam Rosenzweig, Beyond 12

Sarah Richey, EAB

Dr. Broderick Rodell, Millennium School

Joe Saboe, DSST

Raj Salhotra, SWAG to College

Vishal Shah, College Track

Laura Villafranco, YES Prep

Summit Faculty Participants

Evan Anderson, Everest Public High School

Sarah Anderson, Summit Denali

Edwin Avarca, Summit Rainier

Veronica Bettencourt, Expeditions

Anica Bilisoly, Summit Denali

Nicole Cheney, Everest Public High School

Cady Ching, Summit Prep

Jimin Choi, Summit Denali

Marisa Craig, Summit Tahoma

Kennan Damon, Everest Public High School

Laura Easley, Expeditions

Kat Hopkins, Expeditions

Eileen Kim, Summit Tahoma

Dina Le, Summit Tahoma

Wren Maletsky, Summit Shasta

Andrew McCarty, Summit Shasta

Michelle Mogannam, Summit Shasta

Drew Moriates, Everest Public High School

Janine Penafort, Summit Tahoma

Ava Petrash, Summit Shasta

Danielle Pottberg, Summit Atlas

Caitlin Reilly, Summit Prep

Emily Richey, Research & Development

Jesse Roe, Summit Rainier

Melissa Thiriez, Expeditions

Megan Toyama, Summit Tahoma

Gemma Yob, Summit Tamalpais

Max Zisman, Summit Rainier

Jimmy Zuniga, Everest Public High School

References

Allensworth, E. (2013). The use of ninth-grade early warning indicators to improve Chicago schools. *Journal of Education for Students Placed at Risk (JESPAR), 18(1),* 68-83.

Billig, S. (2000). Research on K–12 School-Based Service-Learning: The Evidence Builds. *School K–12. Paper 3.* Retrieved from **http://digitalcommons.unomaha.edu/slcek12/3**.

Bjorklund-Young, A. (2016). Family income and the college completion gap. *Johns Hopkins School of Education Institute for Education Policy.* Retrieved from **https://edpolicy.education.jhu.edu/wp-content/uploads/2016/03/FamilyincomeandcollegegapmastheadFINAL.pdf**.

Borsato, G. N., Nagaoka, J. & Foley, E. (2013). College readiness indicator systems framework. *Voices in Urban Education, (Vol. 38).* Retrieved from **https://consortium-pub.uchicago.edu/sites/default/files/2018-10/VUE%20College%20Readiness.pdf**.

Bowen, W. G., Chingos, M. M., & McPherson, M. S. (2009). *Crossing the finish line: Completing college at America's public universities.* Princeton University Press.

Bronk, K. C. (2012). A grounded theory of the development of noble youth purpose. *Journal of Adolescent Research, 27(1),* 78-109.

Carnevale, A. P., Smith, N., & Strohl, J. (2013). Recovery: Job growth and education requirements through 2020. *Georgetown University Center on Education and the Workforce.* Retrieved from **https://1gyhoq479ufd3yna29x7ubjn-wpengine.netdna-ssl.com/wp-content/uploads/2014/11/Recovery2020.FR_.Web_.pdf**.

Carnevale, A. P., Jayasundera, T., & Gulish, A. (2016). America's Divided Recovery: College Haves and Have-Nots. *Georgetown University Center on Education and the Workforce.* Retrieved from **https://cew.georgetown.edu/wp-content/uploads/Americas-Divided-Recovery-web.pdf**.

Castleman, B. L., & Page, L. C. (2014). A trickle or a torrent? Understanding the extent of summer “melt” among college-intending high school graduates. *Social Science Quarterly, 95(1), 202-220.*

Cheng, D., & Gonzalez, V. (2018). Student Debt and the Class of 2017. 13th Annual Report. *Project on Student Debt.* Retrieved from **https://ticas.org/sites/default/files/pub_files/classof2017.pdf**.

Collier, P. J., & Morgan, D. L. (2008). “Is that paper really due today?”: Differences in first-generation and traditional college students’ understandings of faculty expectations. *Higher Education: The International Journal of Higher Education and Educational Planning, 55(4),* 425-446.

Conley, D. T. & French, E. M. (2014). Student ownership of learning as a key component of college readiness. *American Behavioral Scientist, Vol. 58, No. 8.*

Duckworth, A. L., Peterson, C., Matthews, M. D. & Kelly, D. R. (2007). Grit: Perseverance and passion for long-term goals. *Journal of Personality and Social Psychology, Vol. 92, No. 6.* Retrieved from **https://pdfs.semanticscholar.org/4ba8/54819dd8ffc8a09c6800b91f6101ff211165.pdf**.

Easton, J. Q., Johnson, E., & Sartain, L. (2017). The predictive power of ninth-grade GPA. *Chicago, IL: University of Chicago Consortium on School Research.* Retrieved from **https://consortium.uchicago.edu/sites/default/files/2018-10/Predictive%20Power%20of%20Ninth-Grade-Sept%202017-Consortium.pdf**.

Falcon, L. (2015). Breaking down barriers: First-generation college students and college success. *Innovation Showcase, 10(6).* Retrieved from **https://www.league.org/innovation-showcase/breaking-down-barriers-first-generation-college-students-and-college-success**.

Geiser, S., & Santelices, M. V. (2007). Validity of high-school grades in predicting student success beyond the freshman year: High-school record vs. standardized tests as indicators of four-year college outcomes. *Center for Studies in Higher Education, UC Berkeley.* Retrieved from **https://cshe.berkeley.edu/sites/default/files/publications/rops.geiser._sat_6.13.07.pdf**.

Goldrick-Rab, S. (2016). *Paying the Price: College Costs, Financial Aid, the Betrayal of the American Dream.* Chicago, IL: University of Chicago Press, 40.

Hoffman, J. L., & Lowitzki, K. E. (2005). Predicting college success with high school grades and test scores: Limitations for minority students. *The Review of Higher Education, 28(4),* 455-474.

Ishitani, T. T. (2006). Studying attrition and degree completion behavior among first-generation college students in the United States. *The Journal of Higher Education, 77(5),* 861-885

Lash, D., & Belfiore, G. (2017). Opportunity, work, and the wayfinding decade. Next Generation Learning Challenges, *MyWays Student Success Series: What Learners Need to Thrive in a World of Change, Report, 1.* Retrieved from **https://s3.amazonaws.com/nglc/resource-files/MyWays Series_PartA.pdf**.

Livingston, C. H. (2007). An analysis of the factors shaping student graduation rates for Virginia's public colleges and universities (Doctoral dissertation). *ProQuest Dissertations and Theses. (UMI No. 3279986).*

Haskins, R., Isaacs, J. B., & Sawhill, I. V. (2008). Getting Ahead or Losing Ground: Economic Mobility in America. *Brookings Institution.* Retrieved from **https://www.brookings.edu/wp-content/uploads/2016/07/02_economic_mobility_sawhill_ch8.pdf**.

Muraskin, L., & Lee, J. (2004). Raising the Graduation Rates of Low-Income College Students. *Pell Institute for the Study of Opportunity in Higher Education.* Retrieved from **https://files.eric.ed.gov/fulltext/ED490856.pdf**.

Nagaoka, J., Farrington, C. A., Ehrlich, S. B., & Heath, R. D. (2015). Foundations for Young Adult Success: A Developmental Framework. *University of Chicago Consortium on Chicago School Research.* Retrieved from **https://consortium.uchicago.edu/sites/default/files/2018-10/Foundations%20for%20Young%20Adult-Jun2015-Consortium.pdf**.

Nagaoka, J., & Holsapple, M. A. (2017). Beyond Academic Readiness: Building a broader range of skills for success in college. *Boston, MA: Jobs for the Future.* Retrieved from **https://jfforg-prod-prime.s3.amazonaws.com/media/documents/Beyond-Academic-Readiness_020217.pdf**.

National Center for Education Statistics, U.S. Department of Education. (2018). *The Condition of Education 2018 (NCES 2018-144),* Undergraduate Retention and Graduation Rates. Retrieved from **https://nces.ed.gov/programs/coe/indicator_ctr.asp**.

Pascarella, E. T., Pierson, C. T., Wolniak, G. C., & Terenzini, P. T. (2004). First-generation college students: Additional evidence on college experiences and outcomes. *The Journal of Higher Education, 75(3),* 249-284

Perrine, R. (2001). College stress and persistence as a function of attachment and support. *Journal of the First-Year Experience & Students in Transition, 13(1),* 7-22.

Pew Charitable Trusts (2013). Moving on up: Why do some Americans leave the bottom of the economic ladder, but not others. Pew Charitable Trusts. Retrieved from **https://www.pewtrusts.org/~/media/assets/2013/11/01/movingonuppdf.pdf**.

Pritchard, M. E., & Wilson, G. S. (2003). Using emotional and social factors to predict student success. *Journal of college student development, 44(1),* 18-28.

Roderick, M., Nagaoka, J., Coca, V., & Moeller, E. (2008). From High School to the Future: Potholes on the Road to College. *Consortium on Chicago School Research.* Retrieved from **https://consortium.uchicago.edu/publications/high-school-future-potholes-road-college**.

Roderick, M., Nagaoka, J., Allensworth, E., Coca, V., Correa, M., & Stoker, G. (2006). From High School to the Future: A First Look at Chicago Public School Graduates' College Enrollment, College Preparation, and Graduation from Four-Year Colleges. *Consortium on Chicago School Research.* Retrieved from **https://consortium.uchicago.edu/publications/high-school-future-first-look-chicago-public-school-graduates-college-enrollment**.

Romer, C. (2010). Preparing the Workers of Today for the Jobs of Tomorrow. *Executive Office of the President; Council of Economic Advisers.* Retrieved from **http://digitalcommons.ilr.cornell.edu/key_workplace/631**.

Stewart, S., Lim, D. H., & Kim, J. (2015). Factors Influencing College Persistence for First-Time Students. *Journal of Developmental Education, 12-20.*

Symonds, W. C., Schwartz, R., & Ferguson, R. F. (2011). Pathways to Prosperity: Meeting the Challenge of Preparing Young Americans for the 21st Century. *Pathways to Prosperity Project, Harvard University Graduate School of Education.* Retrieved from **https://www.gse.harvard.edu/sites/default/files/documents/Pathways_to_Prosperity_Feb2011-1.pdf**.

Taylor, P., Fry, R., & Oates, R. (2014). The Rising Cost of NOT Going to College. *Pew Research Center.* Retrieved from **https://www.pewsocialtrends.org/2014/02/11/the-rising-cost-of-not-going-to-college/**.

Therriault, S. B., & Krivoshey, A. (2014). College Persistence Indicators Research Review. *American Institutes for Research.* Retrieved from **https://www.air.org/resource/college-persistence-indicators-research-review**.

Youth Truth Survey. (2016). Learning From Student Voice: Most High Schoolers Feel Unprepared for College and Careers. *Youth Truth Survey.* Retrieved from **http://youthtruthsurvey.org/wp-content/uploads/2016/01/YouthTruth-Learning-From-Student-Voice-College-and-Career-Readiness-2016.pdf**.

Wayt, Lindsay K. (2012). The Impact of Students' Academic and Social Relationships on College Student Persistence. *University of Nebraska-Lincoln Educational Administration: Theses, Dissertations, and Student Research.* Retrieved from **https://digitalcommons.unl.edu/cgi/viewcontent.cgi?article=1108&context=cehsedaddiss**.

Wei, M., Ku, T. Y., & Liao, K. Y. H. (2011). Minority Stress and College Persistence Attitudes Among African American, Asian American, and Latino students: Perception of University Environment as a Mediator. *Cultural Diversity and Ethnic Minority Psychology, 17(2),* 195.

Wilson, J. (2012). Persistence of Latino Students in Community Colleges: An Empowerment Model Addressing Acculturative Stress. *UC San Diego.* ProQuest ID: Wilson_ucsd_0033D_12350. Merritt ID: ark:/20775/bb4028619x. Retrieved from **https://escholarship.org/uc/item/52z2x1qs**.

Whistle, W., & Hiler, T. (2018). The Pell divide: How Four-Year Institutions are Failing to Graduate Low- and Moderate-Income Students. *Third Way.* Retrieved from **https://www.thirdway.org/report/the-pell-divide-how-four-year-institutions-are-failing-to-graduate-low-and-moderate-income-students**.

Yuen, V. (2019). New Insights Into Attainment for Low-Income Students. *Center for American Progress.* Retrieved from **https://www.americanprogress.org/issues/education-postsecondary/reports/2019/02/21/466229/new-insights-attainment-low-income-students/**.

Zhang, Z., & RiCharde, R. S. (1998, May). Prediction and analysis of freshman retention. *AIR 1998 Annual Forum Paper.* Retrieved from **https://files.eric.ed.gov/fulltext/ED422814.pdf**.

Zheng, J. L., Saunders, K. P., Shelley, M. C., II, & Whalen, D. F. (2002). Predictors of academic success for freshmen residence halls students. *Journal of College Student Development, 43,* 267-283