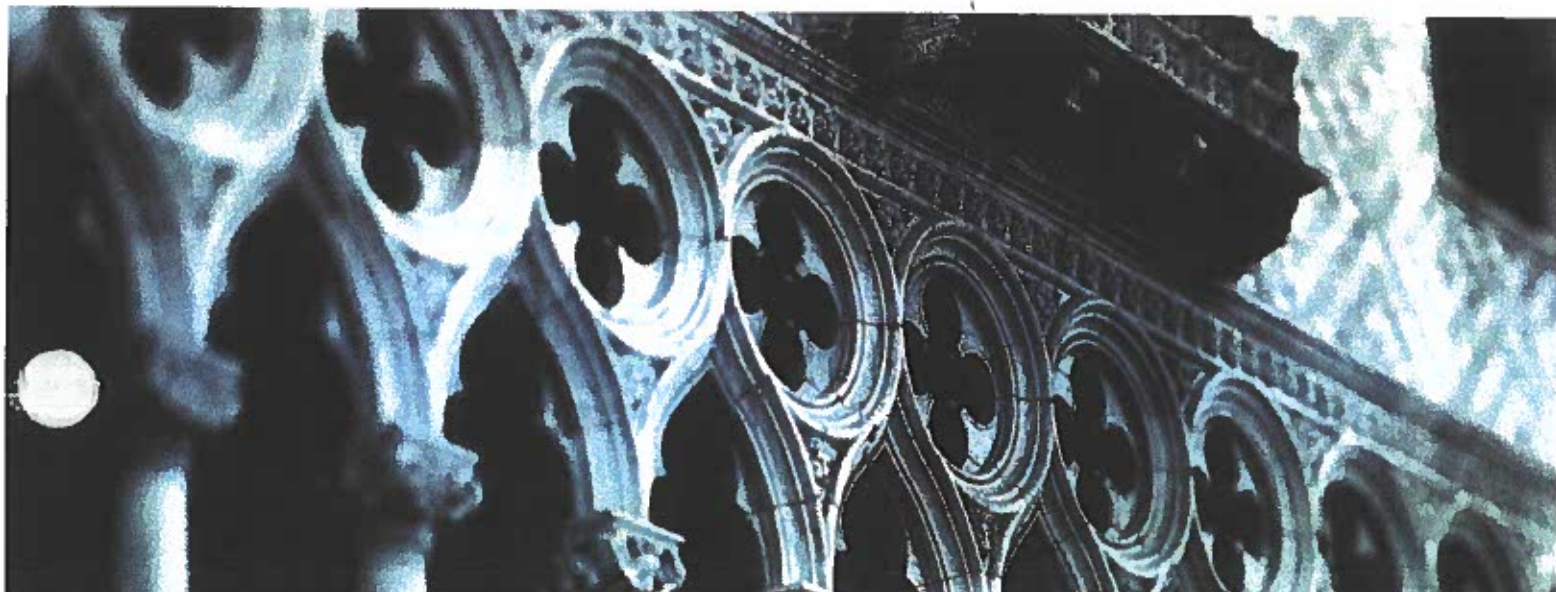


Decreasing Summer Melt and Increasing Persistence and Completion:

Evidence from National and Local efforts to support
students in completing a postsecondary degree, certificate
or credential

RESEARCH REPORT

DUANE B. BAKER, Ed.D.
STACY M. MEHLBERG, Ph.D.
BRANDON CASTO, M.A.
RONAK PATEL, Ph.D.



Duane Baker is the founder and president of Baker Evaluation, Research, and Consulting, Inc. (*The BERC Group*). Dr. Baker has a broad spectrum of public school educational and program experience, including serving as a high school classroom teacher, high school assistant principal, middle school principal, executive director for curriculum and instruction, and assistant superintendent. In addition, he has served as an adjunct instructor in the School of Education at Seattle Pacific University since 1996, where his emphasis was on Educational Measurement and Evaluation and Classroom Assessment.

Dr. Baker also served as the Director of Research for the Washington School Research Center at Seattle Pacific University, and as an evaluator for several organizations including the Bill & Melinda Gates Foundation, Washington Education Foundation, and the Washington State Office of Superintendent of Public Instruction.

Members of *The BERC Group* have K–20 experience as teachers, counselors, psychologists, building administrators, district administrators, and college professors. The team is currently working on research and evaluation projects at the state, regional, district, school, classroom, and student levels. Current areas of focus include classroom instruction, postsecondary enrollment and persistence, community-education partnerships, equity in education, trauma-informed and aware schools, and early childhood education.



Table of Contents

Decreasing Summer Melt and Increasing Persistence and Completion: Evidence from National and Local Efforts	3
Introduction	3
Summer Melt	3
Persistence and Completion.....	4
National and Local Examples of Efforts to Increase Persistence and Completion, and Mitigate Summer Melt	7
Chehalis School District and Community Efforts to Increase Persistence and Completion, and Decrease Summer Melt.....	17
Current Chehalis School District Practices	17
Current Centralia College Practices	19
Recommendations	21
References	26



Executive Summary

In 2014, the Chehalis Foundation partnered with the Chehalis School District (CSD) to implement a comprehensive K-12 career and college readiness initiative: The Student Achievement Initiative (SAI). As part of the SAI, the district set a goal for 60% of its graduates to receive a meaningful post-secondary degree or certificate. This goal aligns with The Washington Roundtable's goal of 70% of Washington students having a postsecondary credential by 2030. The Roundtable's 2016 report provides substantial social and economic evidence to support the need for more Washington students to obtain a postsecondary credential in order to contribute to the state's growing economy. Over the past several years, The BERC Group has provided ongoing consultation to CSD, Centralia College, and community stakeholders to develop and implement an action plan focused on the SAI. This current study explores college persistence and summer melt, two contemporary terms used in education to address the transition from high school to, and through, postsecondary success.

In education, the term 'summer melt' refers to students "who have been accepted to college and intend to enroll, [but] fail to matriculate into college in the fall semester after high school" (Arnold, Chewning, Castleman, & Page, 2015, p.6). In a 2016 National Student Clearinghouse (NSC) report, authors defined persistence as "continued enrollment or degree completion at any institution" (p.1). Research on community college persistence has revealed low completion rates and degree attainment over time. In their 2017 Signature Paper on completing college, the NSC Research Center reported that for students in the high school graduating class of 2011, 37.5% of 2-year starters completed a degree or certification within 6 years. Across the country, schools, districts, government and independent organizations are working to increase college enrollment rates and support student persistence to degree or certificate completion.

While the CSD and Centralia College appear to be leaders in the implementation of practices designed to mitigate these challenges, there are opportunities to build upon the District's programmatic strengths and continue the work being done to reach a more diverse group of students. Over the past six years, The Chehalis School District has implemented several practices to support student persistence and mitigate summer melt. These include:

- Comprehensive Career and College Counseling Support
- Community Mentor Program for High School Seniors
- NAVIANCE College Advisory Program

- Summer Counseling Support
- Powerful Teaching and Learning
- Career and College Readiness Advisors
- College in the High School and Running Start Offerings

Centralia College is also making dedicated efforts to support students as they make the transition from high school to college. Several processes already in place at the college include:

- A Dedicated College Advisor
- Peer Mentoring Program for New Students
- Summer Bridge Program
- Quarterly Financial Incentives
- Data Tracking Systems
- Powerful Teaching and Learning

While many policies and procedures have already been implemented, additional recommendations based on both existing literature and national best practices include:

- Engage Families within the school district and at Centralia College
- Create opportunities for career awareness in elementary and middle school
- Streamline the enrollment process at Centralia College
- Create a process map at Centralia College
- Improve data collection efforts regarding FAFSA and WAFSA
- Target Resources/ Address issues of equity
- Re-engagement strategies
- Provide specific and targeted college advising for students unsure of their path
- Implement Guided Pathways
- Strengthen financial literacy opportunities
- Consider providing high school seniors a perception survey for college readiness during the final months prior to graduation
- Consider updated communication platforms that work well with students, including social media sites.
- Early Education and awareness at CSD in partnership with Centralia College
- Powerful Teaching and Learning

Decreasing Summer Melt and Increasing Persistence and Completion: Evidence from National and Local Efforts

Introduction

In 2014, the Chehalis Foundation partnered with the Chehalis School District to implement a comprehensive K-12 career and college readiness initiative: The Student Achievement Initiative (SAI). As part of the SAI, the district set a goal for 60% of its graduates to receive a meaningful post-secondary degree or certificate. This goal aligned with The Washington Roundtable's goal of 70% of Washington students having a postsecondary credential by 2030. Currently, less than 40% of Washington students go on to earn postsecondary degrees. Over the past several years, The BERC Group has provided ongoing consultation to the CSD, Centralia College, and community stakeholders to develop and implement an action plan focused on the SAI. As part of this consultation, The BERC Group has produced several research reports for the collaborative partnership to guide and support the work. Topics have included college readiness, College Promise Programs, scholarship analysis, and guided pathways. This current study explores college persistence, completion, and summer melt, contemporary terms used in education to address the transition from high school to, and through, postsecondary success.

Research on postsecondary persistence and summer melt has highlighted several areas where students struggle to successfully navigate the transition from high school to college or certificate/ trade programs. While the Chehalis School District and Centralia College appear to be leaders in the implementation of practices designed to mitigate these challenges, there are opportunities to build upon the programmatic strengths and continue the work being done to reach a more diverse group of students. Recently, research on Summer Melt has generated recommendations for ways to support students during the summer between high school and college/ trade school. This report provides a review of relevant literature on summer melt, persistence, and completion, local and national best practices on mitigating summer melt and increasing persistence, and current practices being implemented in the Chehalis School District and local community college. Recommendations are included to build upon current efforts.

Summer Melt

In the field of education, the term Summer Melt has two distinct definitions. The first, used by college admissions offices, refers to high school graduates who change their enrollment decision and choose to go to a different college than originally intended (Arnold, Fleming, DeAnda, Castleman, & Wartman, 2009, p.23). The second definition, widely used by educational researchers, refers to students "who have been accepted to

college and intend to enroll, [but] fail to matriculate in college in the fall semester after high school” (Arnold, Chewing, Castleman, & Page, 2015, p.6). Approximately 10 to 40 percent of students who intend to enroll in college never end up matriculating. Those percentages are even higher “among students from low- and moderate-income families and among those with lower academic achievement” (Castleman, Page, & Snowdon, 2013, p.7). To put the potential impact of this into local context, at a time when most new jobs require a post-secondary degree or credential, only “40% of students in Washington state complete a credential by age 26” (Partnership for Learning – Local high schools, 2019).

Multiple factors influence the Summer Melt. The process of applying to and enrolling in college can be complex, and may require multiple steps and timelines that students often find confusing. Even if a student has applied to a college and has been accepted, there are still several tasks that need to be completed, such as taking college enrollment exams, completing college applications, filling out financial aid paperwork (e.g. the FAFSA), registering for coursework, and paying tuition and fees. For students who are the first in their families to attend college, the unfamiliarity of this process can be overwhelming. For low-income students and students of color, this process can be even more challenging, as they often have less access to resources and can face discriminatory practices. As a result, students either do not apply to colleges, fill-out financial aid paperwork, or complete pre-enrollment tasks (J-PAL Policy Bulletin, 2018).

Summer melt can also be understood through an ecological perspective. While students are in high school, they are part of various microsystems (Bronfenbrenner, 1977). Examples of such microsystems include a student’s peers, family, teachers, guidance counselors, and social media. When these microsystems overlap, they form mesosystems. When a student is in high school, the microsystems they are a part of often encourage college enrollment. However, this influence can wane during the summer months when students depart the microsystems and mesosystems of high school, as they are not yet connected to the new systems they will encounter in college (Arnold, et al., 2015, p.7-9).

Persistence and Completion

In a 2016 National Student Clearinghouse (NSC) report, authors defined persistence as “continued enrollment or degree completion at any institution” (p.1). Research on community college persistence has revealed low completion rates and degree attainment over time (Fike & Fike, 2008), although current trends indicate a steady, but gradual increase in completion rates as more attention has been diverted to the importance of postsecondary credential attainment (Shapiro et al., 2018). In their 2018 [Signature Report](#) on completing college, the NSC Research Center reported that for students in the high

school graduating class of 2012, 39.2% of 2-year starters completed a degree or certification within 6 years, an increase of 1.7-percentage points from the class of 2011. The researchers also noted that more than one third of first time freshmen begin their college career at a community college, suggesting that, "Community colleges play a unique and important role in the U.S. higher education system, not only by awarding certificates and degrees, but also by serving as an entry point for many students who ultimately obtain a bachelor's degree" (p.7). In a more recent on-line article this number was reported even higher; Turk (2019) reported that for the class of 2016, approximately 8.5 million students (46% of undergraduates) enrolled in community college, and almost half of all students that earn a bachelor's degree began their education in community college. Fike and Fike (2008) continued by explaining that barriers to completion include academic preparedness, as well as institutional awareness, cultural, and systemic issues. Ma and Baum (2016) found that degree attainment is positively correlated with parents' highest level of education and family income.

To prepare for and navigate successfully through the community college experience, students need a combination of academic, social, and emotional assets (Stone-Johnson, 2015; Tinto, 1999). Despite this claim, emphasis in the research community has focused primarily on the academic measures that impact persistence (Crede & Kuncel, 2008). In a 2017 publication from The National Academies Press, *Supporting Students' College Success: The Role of Assessment in Intrapersonal and Interpersonal Competencies*, Herman and Hilton presented evidence to support the notion that success in college was complex, relying on the interaction between intrapersonal, interpersonal, and cognitive competencies. These authors focused specifically on student success in STEM fields in four year colleges, although they acknowledged the lack of adequate research on successful completion at two year college was also an area of need.


Herman and Hilton (2017) found significant correlations between college completion and intrapersonal competencies, which they defined as those involving "the ability to regulate one's behavior and emotion to reach goals." (p.1). They identified eight competencies related to persistence, including Positive Future Self; Prosocial Goals & Values; Intrinsic Goals and Interests; Academic Self-Efficacy; Behaviors Related to Conscientiousness; Utility Goals and Values; Growth Mindset; and Sense of Belonging. The authors also noted the importance of intrapersonal skills, defined as the ability for students to express themselves to others, interpret information, and respond accordingly. These interactions between students and their peers, faculty, and the academic environment contribute meaningfully to the discussion of community college persistence (Heller & Cassady, 2017; Rodriguez et al., 2016; Tinto, 2007).

In addition to research on social, emotional, and academic preparedness, there has been a growing awareness of the impact of student diversity on community college outcomes (Witkow, Huynh, & Fuligni, 2015). Community colleges often enroll students that require developmental academic and social supports, have emotional and/or mental health issues, are more ethnically diverse, and enroll at different ages and stages of life. These characteristics require a focused understanding of the unique factors impacting persistence (Cohen & Brawer, 2003; Fike & Fike, 2008).

To address a holistic, systems approach to retention and persistence, educators and researchers have explored student level interactions during the first year of community college, looking for patterns of engagement, barriers, stressors, and academic challenges impacting their ability to persist (Fike & Fike, 2008; Greenberg, Ogle, & Sanderson, 2017; Heller & Cassady, 2017). Programs and initiatives have been implemented to support students, with a focus on increasing access to developmental education, offering courses designed to explore the first-year experience, initiating mentor programs, and encouraging students to use campus support services (Greenberg, Ogle, & Sanderson, 2017; Kimbark, Peters, & Richardson, 2017; Tinto, 2007).

In a 2015 study exploring the barriers to persistence facing rural community college students, Hlinka, Mobelini, and Giltner (2015) conducted a qualitative study to explore the perspectives of traditional age community college students in their first year of postsecondary education. While the study focused on students using community college as a bridge to a four-year bachelor's degree program, researchers primarily addressed the transition from high school through year 1 of higher education. Three researchers conducted individual and group interviews with stakeholders at the high school and community college level, recorded and coded the data, and worked collaboratively to analyze and interpret their findings. They identified three themes impacting student persistence: support vs. autonomy, family obligation, and willingness to leave home. Overall, students, instructional faculty, and school administrators expressed the need to increase student confidence and independence by initially offering substantial supports, then tapering the intensity and level of involvement after completion of the first year in college.

In a quantitative study of first-time-in-college students at a public urban community college, Fike and Fike (2008) collected data on persistence from 9200 students over a four-year period. Enrollment in student support services, passing developmental math and English courses, and parent level of education were significant predictors of persistence, after controlling for demographic variables including age, gender, and ethnicity. The researchers acknowledged the limitations of their research, specifically the lack of an



experimental design. They concluded, however, that developmental education and student supports, consistent with existing literature (Barnett, 2011; Nomi, 2005), were predictors of persistence that warranted more research. Additionally, during a 6-year longitudinal study of college persistence and retention through the Stanford University Bridge Program, researchers found several factors impacting student success, as defined by degree or certificate completion, including a disconnected system of education between k-12 and college, confusing entrance requirements and assessments, policies and procedures at the larger system level, and lack of social supports needed to guide cognitive and behavioral success at the college level (Venezia et al., 2003).

A recent report from the Washington Roundtable suggested five key success factors for postsecondary success (Washington Roundtable, 2018). These include creating a postsecondary culture, providing rigorous academic coursework, engaging in postsecondary and career guidance, developing college going behaviors, and identifying equity resources to align with all student needs. The Washington Roundtable has collected data from students throughout the state to better understand postsecondary persistence and how this phenomenon impacts the economic and social climate of the region. These success factors align with the research cited throughout this report, and provide an outline for school districts and communities taking steps to address postsecondary outcomes in their communities.

National and Local Examples of Efforts to Increase Persistence and Completion, and Mitigate Summer Melt

Across the country, schools, districts, government organizations, and independent organizations are working to increase college enrollment rates and help students to persist, and ultimately compete, a postsecondary degree, certificate, or credential. For example, in Fort Worth Texas, a program called Summer Link connects high school graduates with counselors over the summer months to offer financial, academic and emotional support. The result has been a 9 to 11 percent increase in college enrollment (Daugherty, 2012). In Ohio and North Carolina, personalized FAFSA assistance increased filing rates and college enrollment. And in New Hampshire, a college application mentoring program increased college enrollment rates, particularly for women (J-PAL Policy Bulletin, 2018, p.6).

Georgia State University is addressing summer melt with technology, by using an artificial intelligence (AI) chatbot. The chatbot has the capacity to answer a variety of questions concerning enrollment and the transition to college. In addition, the system sends personalized texts to admitted students to remind them of tasks they need to complete prior to enrollment (Page, & Gehlbach, 2017). During the summer it was


implemented, the chatbot, called *Pounce*, answered more than 200,000 questions, and was part of an effort that reduced summer melt by an estimated 22 percent. Since artificial intelligence systems have the ability to learn, AI systems such as *Pounce* have the potential to become more personalized and effective over time. Additionally, they are a less expensive and more efficient alternative to hiring more counselors (Page & Gehlbach, 2017).

Comprehensive Reform Efforts

As the need for postsecondary completion has increased over the last decade so have programs designed to help students persist in college. Many such programs are called “promise” programs. Michelle Miller-Adams, a researcher with the Upjohn Institute, defined promise communities as those “that seek to transform themselves by making a long-term investment in education through place-based scholarships. While these programs vary in their structure, they all seek to expand access to and success in higher education, deepen the college-going culture in k-12 systems, and support local economic development.” (Miller-Adams, 2016) Janice Brown, Trustee for The Kalamazoo Promise, was quoted as saying, “This is not an educational decision... This is an economic development, quality of life, community-building decision.” In a recent study on the impact of the [Kalamazoo Promise](#), Bartik, Hershbein, and Lachowska (2017) found that as of six years after high school graduation, “the Promise increased the percentage of students earning any postsecondary credential by 10 percentage points, from a pre-Promise baseline of 36 percent to 46 percent” (p. 5). Additionally, the authors found that the estimated Promise effects are statistically similar for lower-income students and their higher-income peers.

Results from over 80 Promise Programs across the country have demonstrated positive results in varying degrees, with the most successful programs being the ones that consider a “whole child” approach, with support services, mentor programs, and community participation embedded as critical components. Researchers found that “A strong mentoring program coupled with a last-dollar scholarship increased a student’s likelihood of attending college by more than 500 percent.” (CFCT, 2016) Additionally, mentor programs have shown positive results regarding persistence in college as well as attendance. Program developers for the Campaign for Free College Tuition (CFCT) created a guide for educational leaders in which they referenced mentoring as the “secret to success”¹. As an example, they highlighted the Tennessee Promise program’s comprehensive mentoring program, a private-public partnership dedicated to increasing

¹ From: *Making Public Colleges Tuition Free; A Briefing Book for State Leaders*



economic growth and supporting student potential. According to Krissy DeAlessandro, the program coordinator for TN Achieves, mentors are chosen from within local communities to support college going students. These volunteers agree to commit 10 hours per year for up to six students, and are asked to act as a resource, an encourager, and, when necessary, a task master. Mentors continue with their mentees from Senior year in high school through their first semester of college, with the expectation that they will maintain an active relationship, connecting at least twice a month, and participating in two mandatory in-person meetings a year. Ms. DeAlessandro shared,

While funding is the carrot that brings the students to us, we wrap the program around them...[our] mentor program is huge. We recruit local people who understand the problems and culture. They provide a resource for kids who struggle... in one study students were 24% more likely to enter the post-secondary pipe-line as a result of TN Achieves, which amounts to about 4000 new students in the pipeline.

Throughout Tennessee, individual counties have established advisory councils to recruit mentors, creating a sustainable model with community investment and ownership. Mentors are recruited through rigorous partnerships with the business community, through relationships with local civic organizations, and from the K-12 and local higher education communities.

Even when students enroll in college, the road to degree completion is not easy. For students who attend community colleges, “only 20 percent of full-time, first-time degree seeking students at public two-year colleges earn degrees within three years” (Sommo, Cullinan, & Manno, 2018, p.1). In Ohio, three community colleges (Cincinnati State Technical and Community College, Cuyahoga Community College, and Lorain County Community College) aimed to increase their completion rates by implementing a program called Accelerated Study in Associate Programs (ASAP). ASAP was developed by the City University of New York and is “a comprehensive program that provides students with up to three years of financial and academic support and other support services to address multiple barriers to student success, with the goal of helping more students graduate within three years” (Sommo, et al., 2018, p. 1). There are five main components to the program. These components include:

1. Enhanced student support (e.g. academic and career advising, and tutoring)
2. Students must be enrolled full-time, and be enrolled in summer courses.
3. Students are provided with financial support (tuition waiver, textbook assistance, and a monthly monetary incentive).
4. Students take a consolidated course schedule and a first-year seminar.

5. The ASAP program is managed, locally, within the college.

As a result of this program, 40% of ASAP students graduated in three years, compared to the average of 20%.

Additionally, a private organization based out of New York is working to address multiple issues surrounding college success. College Access: Research & Action ([CARA](#)), was founded in 2011, and has implemented several programs, including *College Inquiry*, *Right to College*, *College Bridge*, and *College Allies*. These programs address multiple areas of need for college going students, including creating a college aware culture, mitigating summer melt, addressing the needs of first generation and low income students, and building peer mentor programs to address retention (www.caranyc.org). In partnership with CUNY K-16 and the NYC DoE, CARA programs have supported over 90 schools and thousands of students, with postsecondary enrollment rates increasing by more than 10% when schools commit to participating in one, or a combination of programs and professional development offered by CARA trainers.

Recently, Washington Governor Jay Inslee passed legislation to support the Workforce Investment Act, creating [Career Connect Washington](#) (CCW), a comprehensive statewide system for career connected learning developed by local businesses, legislators, philanthropists, educators, students, and parents. Based on research identifying the need to improve postsecondary success throughout Washington State, CCW is a “braided pathway that connects students to the career opportunities around them, starting early in their schooling” (www.careerconnectwa.org). While the hope is to begin implementation of this program in 2019, a 2018 pilot of CCW showed promising results regarding the number of apprenticeships, internships, and project experiences for youths and adults created in communities across Washington. Ultimately, the goals of this program include enhancing educational opportunities aligned with local careers, providing hands-on education linking school to work, and building a comprehensive system of support that is regionalized, not one size fits all.

✓ **Guided Pathways**

In a recent report from [The Brookings Institution](#) on comprehensive approaches to college completion, the author noted, “Low completion rates are a problem for the colleges that seek to serve these students, employers reliant on a strong, local, and appropriately trained workforce, and policymakers responsible for creating a strong workforce capable of driving economic prosperity” (Levesque, 2018). The report focused attention on the structural and motivational barriers students face on their path to college

completion. Similar research has noted that in addition to comprehensive community and k-12 changes, modifications to the policies and procedures at the college level must be adapted to meet the diverse and changing needs of the current college going population.

In a 2016 article on college reform, Baily noted that the “cafeteria” or “self-service” model of education traditionally offered at community colleges creates problems in three areas: “the structure of college-level programs, the intake process and student supports, and developmental education”. Too many choices, and unclear pathways leave students unsure of how to move forward. In addition to these three areas, Clark, Osterwalder, and Pigneur (2012) proposed that often college students don’t understand the nature of what ‘work’ is, making it even more challenging to understand the best way to approach the career path. Baily (2016) continued by noting that isolated interventions have not resulted in increased completion rates for students, suggesting that comprehensive college reform is a more appropriate model to address low completion rates. Baily (2016) proposed, “comprehensive reform requires the three elements that form the conceptual foundation of this volume: a focus on measurable student success, a culture of evidence, and an intentional and cohesive package of programmatic components. The guided pathways model is one example of a comprehensive reform that combines these three elements” (p.17).

A guided pathway is a roadmap for students to follow toward their goals. It helps students determine what their goals are (through advising and exploration), and then provides direction toward that goal (Baily, 2016). A guided pathway begins with a meta-major, or area of study around a student interest. For example, students may be interested in health sciences, physical education and sports medicine, or computer programming. During a student’s first year, they take classes in their meta-major that allow them to explore careers and programs of study. After a year, the student chooses a career or academic goal and is presented with a map of courses they must take to achieve that goal (Achieving the Dream, 2016).

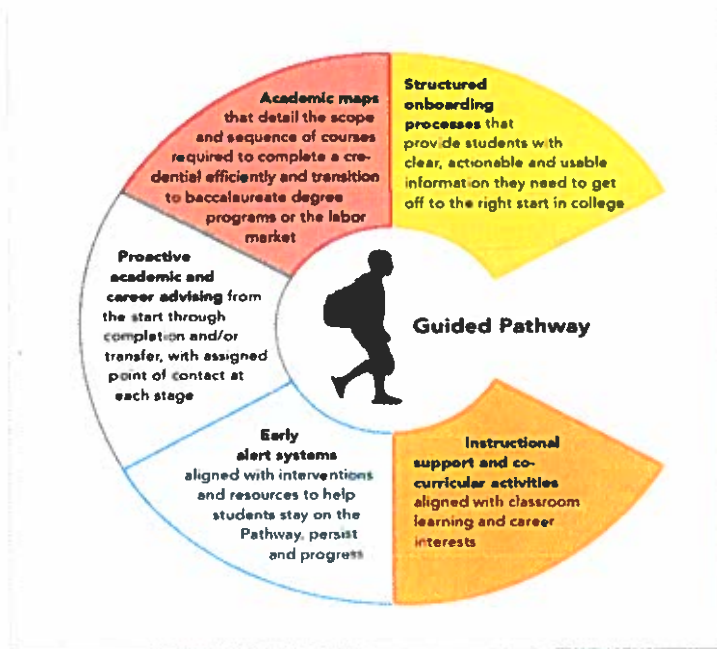


Figure 1. Guided Pathways

Guided Pathways are grounded in research on organizational, behavioral, and cognitive science. Organizational science tells us that successful organizations do not just rely on discrete “best practices,” but instead look at system-wide changes that build toward organizational goals. In community college, the implication is that you cannot hope to make change by simply implementing a new program or advising curriculum. Instead you must change the entire system. To help individuals make their optimal (personal) decision, it is helpful to present them with hierarchical options based on clear information about the costs and benefits. In addition, providing assistance and feedback about their choice is important. For community colleges, this means providing students with focused meta-majors in their first year, and then choices within those meta-majors for more specific programs of study. It also means building a student early-warning system and providing interventions and proactive academic advising (Schwartz & Hoffman, 2014).

A guided pathway is simply a college system that helps students identify and move toward their career or academic goals in the most efficient and direct way. It provides academic maps as an alternative to the traditional community college system of an a la carte menu of courses and electives, and optional academic advising. However, Guided Pathways also require policies and procedures to ensure students are successful. These include structured onboarding, student supports, and early warning systems.

Research on Successful Guided Pathways

According to the Community College Research Center (CCRC), “Students are more likely to complete a degree in a timely fashion if they choose a program and develop an academic plan early on, have a clear road map of the courses they need to take to complete a credential, and receive guidance and support to help them stay on plan.” A major barrier to completion is students taking courses and paying for credits that they do not need.

A report from [Complete College America](#) states that students on track to earn a bachelor’s degree earn 16 unnecessary credits (for a 120-credit program), those earning an associate degree earn 20 additional credits (for a 60-credit program), and those earning a certificate earn 33 unnecessary credits (63 credits earned for a 30-credit program). These extra credits cost students \$8 billion and taxpayers \$11 billion dollars each year. By limiting choices over time, students spend less time (and money) on courses that are not applicable.

Several community colleges in Washington State, supported by a College Spark grant, are implementing guided pathways. Three colleges, including Skagit Valley College, are participating in the American Association of Community Colleges Guided Pathway project. Skagit Valley College is creating an English sequence for each professional-technical and transfer pathway and embedding their experience college success course in a first quarter English course of each pathway.

The State Board of Community and Technical Colleges in Washington is also supporting and exploring Guided Pathway projects. According to Lisa-Garcia Hansen, the Student Success Center Director at SBCTC, you should begin with the end in mind; colleges should look at job gaps in the state and try to increase completion rates that fill those gaps, with a dedicated focus on closing the equity gap. The SBCTC role is to support colleges as they implement the systemic change it will require to make significant gains in these areas. One example was the creation of the iBEST program to minimize the amount of time students spend in developmental math and English and improve the rate at which students earn credits toward their chosen field.

Overall, researchers from The Brookings Institution suggested that “students benefit from perceiving a connection between their coursework and their lives.” Guided pathways provide the opportunity for students to make those meaningful connections, and see direct, clear possibilities for their future. The Brookings report highlighted several policy recommendations to address the need for structural changes at the college level, including:

- Address both structural and motivational barriers to community college completion.
- Apply lessons from proven and promising models, for example CUNY’s ASAP model.
- Leverage emerging technologies to reduce structural barriers, particularly in the context of student support services.
- Rigorously pilot and evaluate expectancy value interventions, to better understand motivational barriers.
- Evaluate innovative efforts and disseminate information widely.

Addressing Issues of Equity

Locally, the city of Seattle has been addressing issues of equity, persistence, and summer melt through [The Project Roadmap](#), a collective impact initiative that began in 2010 “to improve student achievement from cradle through college in South King County and South Seattle” (Road Map Project, 2019). Through multisector and community partnerships, the collaboration hopes to increase equitable policies and practices to eliminate opportunity and achievement gaps, with a goal of 70 percent of students earning a college degree or career credential by 2030. The Road Map Project has introduced several initiatives to support their work, including *Parent Leadership teams*, *Local Improvement Networks*, *The Open Doors Improvement Network*, *The Youth Program Quality Improvement Process*, and a *College and Career Leadership Institute*. While several of these programs are similar to the work being done at the National level, *The Parent Leadership Team* offers new insights into the importance of building connections with families to support students into postsecondary success.

The Parent Leadership Team, a group of 17 parents from across the region, worked together to generate a plan based on the need for stronger connections between families, schools, and the community. Their report, [Plan for Educational Equity through Family Leadership and Improved Communications with Schools](#), introduced several recommendations, including increasing school budgets for family engagement efforts, developing a parent-to-parent mentor program, building leadership capacity by creating a Parent Connector position with the goal of having a parent advocate to inform families and amplify parent voice, providing training for parent leaders, creating an advisory committee to guide the work, and increasing communication between schools and families by using technology.

Several studies focus on postsecondary outcomes for low-income students, an increasing percent of the college-going community, particularly at 2-year colleges (Kunkler, 2017; Lumina Foundation, 2016). Broton and Godrick-Rab (2016), in their article on supporting

low socio-economic students as they struggle with food and housing insecurity as a result of the high costs associated with postsecondary education, wrote:

These material hardships affect learning and the effort that can be devoted to school. They compromise students' chances for degree completion and affect the institutions in which the students enroll. While higher education has focused on helping the poor attend college—succeeding in placing almost 10 million Pell Grant recipients into colleges and universities—it has inadequately addressed the conditions of poverty confronting students as they pursue degrees.

The authors highlight the need for communities and colleges to be aware of student needs, advocate for these members of their community, and identify policies and procedures that can mitigate these barriers for students.

Kruger, Parnell, and Wesaw (2016) discussed the use of emergency aid programs to reduce barriers to college persistence. Emergency aid programs include one-time grants, loans, and completion scholarships of less than \$1,500 provided to students facing unexpected financial crisis, as well as food pantries, housing assistance, and transportation assistance. While the authors found that approximately 75% of the colleges they surveyed have some type of emergency aid, they are serving a relatively small portion of their campus community. In many cases, students that receive this support actively seek assistance, as marketing for these programs is not robust. Kruger et al. (2016) identified several components of a successful emergency aid program, including developing a common language to discuss emergency aid, creating policy for the administration of emergency grants and loans, developing a guidebook or tool kit for colleges to follow as they develop their own programs, using data to help identify students that might need the support, and automating the processes to make the program more sustainable. The authors also noted that these programs are not continuous offerings of financial support, and are often administered collaboratively by the financial aid department and the division of student affairs.

In 2005 The Lumina Foundation created two multi-year pilot programs, [Dreamkeepers](#) and [Angel Fund](#), to provide emergency financial assistance to students at risk for dropping out of college as a result of financial barriers. These programs, implemented at over 30 colleges, have supported thousands of students each year. Both student aid recipients and administrators report that these programs helped students stay in school, and the percentage of aid recipients who reenrolled in the term subsequent to receiving aid is roughly comparable to the average retention rate at these colleges. Aid recipients are also benefiting from these emergency financial aid programs by becoming better connected to on- and off-campus supportive services (p.ES-5). While not a causal study,

the authors provided several considerations for creating a successful emergency aid program, including building administrative and structural capacity, creating effective marketing, identifying successful fundraising strategies, collaborating with other local colleges, and managing student data to track impact.

In King County, Washington, The United Way has been working to support low-income students to obtain a postsecondary degree, certificate, or credential. Their Bridge to Finish program provides a combination of programs, including financial grants, free tax preparation, financial coaching, food pantries, and housing and legal services. These services are designed to meet the basic needs of students in an effort to improve educational outcomes by eliminating the financial emergencies that become barriers for students on their path to completion.

Similar programs, including [Single Stop](#), and The Benefits Access for College Completion ([BACC](#)), have seen varying levels success regarding postsecondary persistence. These programs do not suggest a “one size fits all model” however, instead suggesting “an overarching logic model of key strategies to...determine which benefits to prioritize and how each service would be delivered, with a strong emphasis on institutionalization” (Duke Benfield & Saunders, 2016, p.7). An evaluation of the BACC program found that all of the institutions that received support noted that increasing access to public benefits was more effective when combined with other services in which students already engage, such as financial aid, counseling, and advising. In addition, the evaluation determined that the success of this support depended on:

- The role of institutional leadership in fostering buy-in success;
- Changes in student flow and business processes;
- Actions to overcome cultural barriers within the institution;
- The capacity to produce and use data;
- The importance of collaboration and teamwork within the colleges;
- New relationships with local and state benefits agencies; and
- The need to overcome student stigma.

In 2019, the United Way implemented a new pilot program which offers students matching dollars, up to \$300.00, for completing the four components of the program. Students receive individualized financial coaching in coordination with the opportunity to access a safe way to begin saving money and building credit. To participate, students must meet certain criteria, including at least part-time enrollment in college, some type of employment, no active bankruptcy, and at least one indicator of financial distress. Once enrolled in the program, students participate in several activities in order to receive their matched funding. These include:

- Make on-time credit building payments for at least six months
- Attend 2 goal setting/ financial coaching sessions
- Attend one credit related session with selected coach
- Attend at least one program workshop
- Raise your credit score to receive the \$300 match

Program leaders will evaluate the program based on the following question: *Will the pilot program impact students' ability to build personal savings, improve credit, increase confidence in ability navigate financial systems, and change long-term financial behaviors?* Student persistence into their next term/ quarter of college will be one measure program leaders will use to determine the success of this intervention.

In their recent report, [*Beyond Financial Aid*](#), Lumina Foundation researchers identified five strategies to improve post-secondary outcomes for low-income students. The argument for dedicated support for this specific population is strong; only 11% of low-income students complete a postsecondary degree within 6 years, and by age 24, only 9% of low-income students have a bachelor's degree compared to 77% of their high-income, same aged peers. The five strategies identified in the Lumina report include:

- Know your low-income student
- Review internal processes and organize supports
- Build internal and external partnerships
- Optimize student use of services
- Create a culture of support

Chehalis School District and Community Efforts to Increase Persistence and Completion, and Decrease Summer Melt

Current Chehalis School District Practices

As part of the Student Achievement Initiative (SAI), the Chehalis School District has implemented policies and procedures to support the postsecondary needs of all students, including addressing summer melt. One important process was hiring career and college advisors to support students in the district. During an interview with the career and college advisors, one shared, "I think many of our students melt in the summer because they are still not ready. We have a population that is not going to go and waste a lot of money on school when they really don't know where they want to go." She continued by noting that they are working really hard to support the "in-betweeners," or kids that just need that extra push. Advisors also discussed the importance of understanding the community, and have worked to build relationships with students and their families.

These relationships have created opportunities for students to ask more questions about their postsecondary options. The career and college advisors have been instrumental in building a career and college ready culture in the Chehalis School district, and have initiated and supported many of the policies and practices implemented over the past seven years. A list of the current practices to increase college readiness being implemented in the Chehalis School District is included below:

- ***Comprehensive Career and College Counseling Support:*** The Chehalis Foundation and Chehalis school district have made a commitment to providing career and college counseling for students at the middle and high school. These counselors meet regularly with students to discuss postsecondary options.
- ***FAFSA support: Parent and Student Workshops:*** The high school holds a financial aid information night, as well as a FAFSA workshop for families. The director of Centralia College (CC) comes to the school district to support this effort. In addition, CC holds FAFSA Fridays throughout the year for students on the college campus.
- ***Community Mentor Program for High School Seniors:*** The school district invested in creating a community mentor program to support high school students during their senior year and through their transition to a college/ career option. This mentor program has grown over the past 2 years, with 29 mentors from the community supporting all high school seniors willing to meet with them. The middle school career and college counselor developed a comprehensive program for mentors, with training and support throughout their 18 month commitment.
- ***High School & Beyond Plan:*** The school counselors begin this process in middle school to help identify a pathway for course registration based on the students' career interests. An official High School & Beyond Plan is completed in the Spring of senior year as a requirement for graduation.
- ***College Cheat Sheet:*** The high school career and college advisor generated this document to help students and families navigate the college enrollment process at the local community college. The information is specific to CC, but the intention is to create similar documents for additional schools with high enrollment rates.
- ***NAVIANCE College Advisory Program:*** The high school has invested in the success of its students by building a career and college advisory block

into their daily schedule. These students led classes incorporate the NAVIANCE college advisory software, which provides curriculum, career interest surveys, and personal reflection opportunities for students as they build college eligibility, awareness, and preparedness.

- ***Collaborative College Application Sessions:*** The school district has built in opportunities for students to apply to CC as a cohort, during the school day.
- ***Summer Counseling Support:*** With funding from the Chehalis Foundation, the school district hires a part-time counselor to support students during the summer after high school graduation. This summer counselor has been hired from within the district, with the intention of having a person whom the students have a relationship with, to foster a sense of trust and respect.
- ***Powerful Teaching and Learning:*** Over the past 6 years the school district has made instruction a priority, with research supporting the need for solid instruction as a foundation for postsecondary success. Teacher and school leaders have been actively working to increase the use of research based instructional habits that align with current socio-neuroscience and cognitive/learning science-based research on both the adolescent/young adult brain and fundamental social dimensions/nature of learning.

Current Centralia College Practices

In addition to the policies and procedures being implemented within the school district, Centralia College is making dedicated efforts to support students as they make the transition from high school to college. During an interview with the CC president, he shared, "It is way easier not to go to school than to go to school. If there are a series of steps, at every point it is easier to not fill out forms than to complete them. We can support them through the steps... but students don't do optional." He continued by sharing that the college is committed to working with The Chehalis School District, noting that "the process in Chehalis is really what it is all about, it might just take a really long time to see any change. There is a whole lot of noise surrounding students that give the opposite message..." Several processes already in place at the college are highlighted below.

- **Financial Aid Support:** CC provides assistance for students who have not completed their paperwork on-time, providing a grace period until their funds are available.
- **Dedicated Advisor:** Centralia college has hired a full time advisor to support W.F. West students as they enroll and persist in college. The funding for this position is shared with the Chehalis school district, and the role includes individualized support and advising, as well as data tracking and campus wide advocacy.
- **Peer Mentoring Program for New Students:** The office of student support services is working to build a mentor program for new students, pairing them with returning college students to provide a same-aged contact person to provide relatable support.
- **TRIO Support Services.** The Federal TRIO Programs (TRIO) are outreach and student services programs designed to identify and provide services for individuals from disadvantaged backgrounds. TRIO includes eight programs targeted to serve and assist low-income individuals, first-generation college students, and individuals with disabilities to progress through the academic pipeline from middle school to postbaccalaureate programs. TRIO also includes a training program for directors and staff of TRIO projects. (www2.ed.gov)
- **Summer Bridge Program.** CC leaders have created a summer bridge program to support enrolled students during the gap between high school graduation and the beginning of their college semester. This program is a hybrid on-line/ in person program, with opportunities for students to interact with new and experienced students, tour the campus and learn about campus life, and meet college faculty and support staff.
- **Quarterly Financial Incentives:** Stipends (up to \$100 per student) provided for participating in campus sanctioned activities, including on-line learning modules, the freshman experience course, pre-advising

sessions, FAFSA Fridays, mid-term grade checks, advising sessions, and registering for classes.

- **CANVAS:** The college has created an on-line college readiness series, including modules on college readiness, stress management, and career exploration.
- **President's Dinner:** To welcome new students and their families to the college community, CC hosted a catered dinner for 25 incoming students. Staff from several student support programs were present, and students were entered into drawings for prizes.
- **Data Tracking Systems:** The college is working to build comprehensive data dashboards to better understand enrollment and retention patterns for students.
- **Powerful Teaching and Learning:** The first cohort of college professors interested in aligning their instructional practice with brain based research participated in a series of professional development and learning walks.

Recommendations

Tinto (2007) discussed that while there is a tremendous amount of research on retention, it is not the same as understanding why students stay and persist. While knowing that factors, including family context and high school experiences, impact student persistence, this knowledge does not tell educators how to create programs that support specific student needs. He wrote, "What is needed, and what is not yet available is a model of institutional action that provides guidelines for the development of effective policies and programs that institutions can reasonably employ to enhance the persistence of all their students." (p.7).

Davison and Wilson (2013) proposed, however, that for community college students, deficit models are not an appropriate fit. The authors suggested that looking at college and career persistence from an institutional deficit model, instead of one focused on the student, was a more inclusive and culturally relevant position. They proposed that academic, social, and emotional characteristics were not distinct, but interrelated. Referencing Uri Bronfenbrenner's Ecological Systems Theory (1977), Davidson and Wilson noted that community college students have layered systems in place that impact their decision to persist, not limited to the sole influence of their college experience. The authors wrote, "Community college students do not jettison relationships with family, friends, and coworkers to form new relationships; rather, they form new relationships

alongside existing relationships...elements of the students' lives are not easily compartmentalized (p.521).” Their model, conceptualized as The Collective Affiliation Model, proposed a non-linear model specific to the needs of community college students, where institutions are responsible for adapting to the developing and diverse needs of their students to encourage persistence to college and career attainment.

During interviews with school district and college leaders, it was evident that the community is working to build a collaborative, comprehensive model for postsecondary success that acknowledges the needs of the student. Additionally, they are working to adapt policies and procedures to meet those needs. While many policies and procedures have already been implemented, additional recommendations based on existing literature and National best practices are included below.


- ***Engage Families:*** The Vice President of Student Support Services at CC shared, “One thing we have not done yet, at the college or the initiative, is focus on the families- we need to do this to increase buy in- we are looking into best practices on getting buy in from the families.” This sentiment has been confirmed by research on local and national best practices, including the work of The Road Map Project. The Parent Leadership Team is one example of this type of outreach.
- ***Streamline the enrollment process at Centralia College.*** Currently, there are several steps in the enrollment process that require visits to the college campus. The high school career and college advisor mentioned that this was a barrier to completion for many students. One possibility is to offer some of the steps, including watching the orientation video, on the W.F. West campus. Evidence from research supports the proposition that providing a simple, straightforward pathway to college enrollment increases equity access for all students.
- ***Create a Process Map.*** The CC president shared, “Maybe what we need to do is create a process map of every one of the steps along the way, and look at which we can eliminate/ change/ stream-line/ or automate.” In collaboration with The Chehalis School District, this could help to identify the enrollment and persistence barriers specific to this community, and could be a model for other school district- community college partnerships engaging in the same efforts. Included in this process map might be a theory of action to help guide the continued efforts.

- ***Improve Data Collection Efforts Regarding FAFSA and WAFSA:***
Research on Summer Melt provided insight into the challenges students and families face regarding financial aid. In addition to form completion, there are multiple steps along the way that can impact understanding of and access to funds. One barrier is the random verification process that impacts approximately 1/3 of FAFSA applicants. The high school career and college advisor shared that there are planned changes to the WSAC student financial aid portal which would allow more individualized information for counselors helping students who have been selected for the FAFSA verification process. This should help to mitigate barriers to FAFSA completion. Additionally, communication platforms that work for students and families are another way to address these process steps that might impede completion of financial aid forms.

- ***Target Resources/ Address Issues of Equity:*** One suggestion is to identify the students that appear to need more support, and focus efforts on those students specifically. This recommendation was made during interviews with career and college advisors, who shared that often the students that seek out support are the ones that need it the least. Those that need it the most are often less likely to ask. Understanding this pattern of behavior would help support staff access a broader range of students. Additionally, knowing students who are in need will put the district and college in a better position to facilitate emergency funding resources.

- ***Re-engagement strategies:*** Continue to develop communication and reengagement strategies for students that chose to take a different path directly from high school.
 - Build relationships with local trade and certificate programs
 - Identify opportunities to build connections between professional certificate and trade programs not affiliated with the local college
 - Offer community in-services and informational sessions throughout the year in public spaces, designed to provide young adults information on the opportunities available and reasons to reengage in college.
 - Make efforts to survey students that drop-out of college to identify why, and what supports or efforts might help them to re-enroll.

- ***Provide specific and targeted college advising for students unsure of their path:*** Currently, students have general advising, but targeted advising using a guided pathways model would benefit students that are unclear about where they hope to go in the future. CC is working to build capacity and infrastructure regarding guided pathways. Additionally, career and college counselors at CC and CSD are making strategic efforts to connect with students who have been identified as needing additional support based on interactions with school faculty.
- ***Implement Guided Pathways:*** A guided pathway is a roadmap for students to follow toward their goals. It helps students determine what their goals are (through advising and exploration), and then provides direction toward that goal. We recommend continued development of a guided pathway model, beginning with the school district and continuing into college. One opportunity is to research the efforts of Career Connect Washington, a new comprehensive statewide program intended to support community efforts to improve postsecondary success.
- ***Strengthen financial literacy opportunities:*** While the high school and college both offer opportunities to address the challenges of financial literacy, this issue was prevalent in the Summer Melt literature, and should be reviewed for best practices.
- ***Consider providing high school seniors a perception survey for college readiness during the final months prior to graduation:*** Research has shown that student plans often change multiple times during the final few months of high school with the realities of life after public education looming. A survey during the final days of high school that includes questions about student intentions, but also their worries, uncertainties, and confusion about the processes needed to successfully enroll and persist could provide insights for college and career counselors.
- ***Consider updated communication platforms that work well with students, including social media sites and technology platforms.*** Research supports the need for communication efforts that work with specific communities. The Parent Leadership Team suggested engaging in targeted efforts to understand how families prefer to communicate. Programs like *Pounce*, an AI Chatbot designed to answer questions about



school enrollment, deadlines, and financial aid, have shown some promise in decreasing summer melt.

- ***Early Education and Awareness:*** Begin conversations about postsecondary success early in students' K-12 education, including discussions with families and caregivers about the strong social and economic arguments for postsecondary persistence. Research on College Promise programs supports the notion that a comprehensive approach to career and college readiness begins at early child, and extends into adulthood.

- ***Continue to Develop the College Ready Umbrella, from P to 20:*** Empirical research supports "college and career readiness" as the umbrella under which many education and workforce policies, programs, and initiatives thrive. For programs to be most effective they should include high-quality early education and strong, foundational standards in elementary school to support rigorous career and technical education. These comprehensive programs include social supports for families from the birth of their students.

- ***Powerful Teaching and Learning:*** We recommend continued college development of instructional alignment with brain-based practices. The opportunity to have cohorts of college faculty dedicate time to reflecting on research based instructional habits helps to align the school district and college practices around instruction, providing a more seamless academic transition for students from high school to college.

References

- Achieving the Dream. (2016). Building Guided Pathways. Retrieved from http://achievingthedream.org/sites/default/files/resources/building_guided_pathways_toolkit_2_16.pdf
- Arnold, K.D., Chewning, A., Castleman, B., and Page, L. (2015). Advisor and student experiences of summer support for college-intending, low-income high school graduates, *Journal of College Access*, 1(1).
- Arnold, K.D., Fleming, S., DeAnda, M., Castleman, B., & Wartman, K. L. (2009). The summer flood: The invisible gap among low-income students. *The NEA Higher Education Journal*, 23-34. Retrieved March 19, 2019, from <http://whp-template.nea.org/assets/docs/HE/TA09SummerFlood.pdf>
- Bailey, T. (2016). The Need for Comprehensive Reform: From Access to Completion. *New Directions for Community Colleges*, 2016(176), 11–21. <https://doi-org.ezproxy.spu.edu/10.1002/cc.20218>
- Bartik, T. J., Hershbein, B., and Lachowska, M. (2017). The effects of the Kalamazoo promise scholarship on college enrollment, persistence, and completion. *Upjohn Institute Working Paper 15-229*. Kalamazoo, MI: W.E. Upjohn Institute for Employment Research. <https://doi.org/10.17848/wp15-229>
- Broton, K., & Goldrick-Rab, S. (2016). The dark side of college (un) affordability: Food and housing insecurity in higher education. *Change: The Magazine of Higher Learning*, 48(1), 16-25.
- Castleman, B., Arnold, K., & Wartman, K. (2012). Stemming the tide of summer melt: An experimental study of the effects of post-high school summer intervention on

low-income students' college enrollment. *Journal of Research on Educational Effectiveness*, 5(1), 1–17. <https://doi.org/10.1080/19345747.2011.618214>

Castleman, B. L., Page, L. C., & Snowdon, A. L. (2013). *SDP Summer Melt Handbook: A Guide to Investigating and Responding to Summer Melt*. In Center for Education Policy Research at Harvard University. Retrieved March 18, 2019, from <https://sdp.cepr.harvard.edu/files/cepr-sdp/files/sdp-summer-melt-handbook.pdf>

Clark, T., Osterwalder, A., & Pigneur, Y. (2012). *Business model you: a one-page method for reinventing your career*. John Wiley & Sons.

Daugherty, L., (2012). Proceedings from Fall Research Conference, Association for Public Policy Analysis and Management, November 2012: *Summer Link: A Counseling Intervention to Address the Transition from High School to College in a Large Urban District*

Duke Benfield, A. E. & Saunders, K. (2016). Benefits access for college completion: Lessons learned from a community college initiative to help low-income students. Retrieved from: www.clasp.org

Geckeler, C., Beach, C., Pih, M., & Yan, L. (2008). Helping community college students cope with financial emergencies: Lessons from the Dreamkeepers and Angel Fund emergency financial aid programs. Retrieved from: www.mdrc.org

Harvey, J. A., & Fellow, E. H. (2019). Addressing barriers to completion for low-income students: A Report on the "Save2Build" Credit and Savings Building Pilot. *United Way of King County Benefits Hub*

J-PAL Policy Bulletin. (2018). "Simplifying Barriers Along the Bridge to College"

Cambridge, MA: Abdul Latif Jameel Poverty Action Lab.

Kruger, K., Parnell, A., & Wesaw, A. (2016). Landscape analysis of emergency aid programs, NASPA. Retrieved from:

https://www.naspa.org/images/uploads/main/Emergency_Aid_Report.pdf.

Kunkler, A. (2017). United Way continues focus on intergenerational poverty in 2017.

Retrieved from: <http://www.chronline.com>

Levesque, E. M. (2018). Improving community college completion rates by addressing structural and motivational barriers. *The Brookings Institution*. Retrieved from:

<https://www.brookings.edu/research/community-college-completion-rates-structural-and-motivational-barriers/>

Lumina Foundation (2018). Beyond financial aid: How colleges can strengthen the financial stability of low-income students and improve student outcomes.

Retrieved from: <https://www.luminafoundation.org/>

Ma, J. & Baum, S. (2016). Trends in community colleges: Enrollment, prices, student debt, and completion. *College Board Research*,

Matthews, D. (2012). *A stronger nation through higher education*. Retrieved from

Lumina Foundation: <https://www.luminafoundation.org/files/resources/a-stronger-nation-through-higher-education-2014.pdf>

Miller-Adams, M. (2009). A not-so-simple gift. In *The power of a promise: Education and economic renewal in Kalamazoo*. Kalamazoo, MI: W.E. Upjohn Institute for Employment Research, pp. 1-28.

Miller-Adams, M. & Fiore, J. (2013). *The Kalamazoo promise and changing perceptions of the Kalamazoo public schools*. (Policy Paper No. 2013-016). Kalamazoo, MI: W.E. Upjohn Institute for Employment Research. Retrieved from <https://doi.org/10.17848/pol2015-016>

National Academies of Sciences, Engineering, and Medicine. 2017. *Supporting Students' College Success: The Role of Assessment of Intrapersonal and Interpersonal Competencies*. Washington, DC: The National Academies Press. <https://doi.org/10.17226/24697>

Page, L. C., & Gehlbach, H. (2017). How an artificially intelligent virtual assistant helps students navigate the road to college. AERA Open. <https://doi.org/10.1177/2332858417749220>

Partnership for Learning. (2019, March 05). Edmonds SD: The Credential Is Essential. Retrieved March 18, 2019, from <https://www.youtube.com/watch?v=G21UrsyfPUc>

Partnership for Learning. (2019, March 06). Local high schools work to increase postsecondary enrollment | Provided by Partnership for Learning. Retrieved March 18, 2019, from <https://www.seattletimes.com/sponsored/local-high-schools-work-to-increase-postsecondary-enrollment/>

Reduction of Summer Melt | Georgia State Student Success Initiatives. (n.d.). Retrieved March 23, 2019, from <https://success.gsu.edu/initiatives/reduction-of-summer-melt/>

- Rodriquez, M. N., (2016). Seizing the moment: Community colleges collaborating with K-12 to improve student success. *American Association of Community Colleges*, 1-18.
- Schwartz, R., & Hoffman, N. (2014). Career pathways: A route to upward mobility. Paper presented at the Conference on Education for Improving Mobility, Thomas B. Fordham Institute, New York.
- Shapiro, D., Dundar, A., Huie, F., Wakhungu, P.K., Bhimdiwala, A. & Wilson, S. E. (2018, December). Completing College: A National View of Student Completion Rates – Fall 2012 Cohort (Signature Report No. 16). Herndon, VA: National Student Clearinghouse Research Center.
- Sommo, C., Cullinan, D., & Manno, M. S. (2018, December). Doubling Graduation Rates in a New State: Two-Year Findings from the ASAP Demonstration. Retrieved March 18, 2019, from <https://www.mdrc.org/publication/doubling-graduation-rates-new-state>
- Stone-Johnson, C. (2015). Counselors as policy actors: Challenges to systemic involvement in college and career readiness policy in secondary schools. *American Secondary Education*, 43(2), 7-43.
- Upjohn Institute for Employment Research (2015). *Active Promise Scholarship Matrix*. Retrieved from <http://www.upjohn.org/sites/default/files/promise/Lumina/Promisescholarshipprograms.pdf>
- Venezia, A., Kirst, M. W., & Antonio, A. L. (2003). *Betraying the college dream: How disconnected K-12 and postsecondary education systems undermine student*



aspirations. Stanford, CA: Stanford University Institute for Higher Education
Research

The BERC Group, Inc.
Redmond, WA 98037
Phone: 425.327.2801

Web: www.bercgroup.com