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REPORT

FINAL REPORT

Implementing the Virginia RETHINKS Health Sciences Education TAACCCT Grant

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EXECUTIVE SUMMARY

In 2011, the U.S. Department of Labor (DOL) awarded Tidewater Community College a $24 million Round I Trade Adjustment Assistance Community College and Career Training (TAACCCT) grant as lead for the 23 community colleges in the Virginia Community College System (VCCS). Like all TAACCCT grants, "Virginia RETHINKS Health Sciences Education," is structured to prepare veterans (as well as eligible spouses), trade-affected and other displaced or low-skilled workers for employment in high-wage, high-skill occupations.[1] The VCCS chose to focus its efforts on health occupations after identifying health as a growth field with job openings throughout the state and confirming that gaps existed in the community college system's ability to train interested students.

To better prepare students for jobs in health care industries, the VCCS designed the Virginia RETHINKS Health Sciences Education grant to achieve three broad goals: (1) improve student outcomes, (2) build connections to the workforce, and (3) improve efficiencies at colleges within the system. The VCCS' efforts under the TAACCCT grant are part of a broader effort by the state to reorient community colleges to serve the needs of the state's student populations. Virginia's community colleges face many of the same challenges confronted by colleges across the nation, including fluctuating student enrollment, increasing need for developmental education, and declining state funding. The VCCS developed a strategic plan—Achieve 2015— to address these challenges, in part by redesigning developmental education and using technology to serve students more efficiently. The strategic plan set a series of measurable targets, including increasing the number of individuals who are educated and trained by the VCCS and tripling the number of students graduating, transferring, or completing a workforce credential.

The VCCS, under the leadership of Tidewater Community College (hereby referred to collectively as the "consortium leadership"), structured its TAACCCT grant to align with the existing Achieve 2015 plan and proposed seven "strategies" to improve student outcomes either directly (for example, through enhanced educational options and support services) or indirectly (for example, through technology infrastructure improvements). Specific strategies include redesigning and creating curriculum in developmental education and health-related courses, offering in-person counseling and mentoring to help students navigate careers and succeed in the classroom, and launching several technology platforms to help students navigate careers and coursework and help faculty and staff to support students in pursuit of these goals.

In 2014, Tidewater Community College contracted with Mathematica Policy Research to conduct an implementation and outcomes evaluation of the grant. The implementation study, which is the focus of this report, describes implementation of the strategies at the college level as well as cross-strategy findings to inform future implementation efforts and potential replication and scaling of program strategies both within and outside the VCCS. The ongoing outcomes study will assess, where possible, the extent to which aspects of the TAACCCT grant improved student education and employment outcomes.

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[1] Moving forward, the term "veterans" refers to both veterans and eligible spouses.

Overview of the seven grant strategies

The Virginia RETHINKS Health Sciences Education grant includes the following seven strategies:

- **Strategy 1: Adult Career Coaches (ACCs) and Experiential Learning/Job Placement Coordinators (ELJPCs).** Under the grant, colleges received funding to hire ACCs and ELJPCs. ACCs serve community college students and other clients from the community, through career coaching and advising to assist them in enrolling in and completing appropriate coursework. ELJPCs identify opportunities with employers and connect clients with those opportunities through placement services. This strategy was adopted to help veterans, trade-affected and other displaced or low-skilled workers—who tend to be older and in need of a career change—to connect with training opportunities at the community colleges and overcome barriers to reemployment. ACCs and ELJPCs are generally referred to as "coaches" throughout this report.

- **Strategy 2: Virginia Education Wizard.** Initially implemented in 2009, the Wizard is an automated tool designed to help Virginians explore careers, educational options, and educational costs, and to identify and apply to the state's public institutions of higher education. The grant funded the development of two modules for the Wizard: the course and career planners. The new modules were intended to fill gaps in student supportive services.

- **Strategy 3: Student Assistance and Intervention for Learning Success (SAILS) Early Alert System.** The grant fully funded the development and implementation of SAILS, a communication system that provides faculty with a means of directly contacting students and support services staff about students' academic progress. The goal of the early alert system is to improve student retention and success.

- **Strategy 4: Redesigned developmental education curriculum, including faculty professional development (PD).** The VCCS' redesigned developmental education courses in mathematics and English are intended to reduce the need for remediation, ease the transition to college courses, and increase credential attainment, graduation rates, and transfers to four-year colleges and universities. In a keynote address at the 2011 National Association for Developmental Education (NADE) Conference, the chancellor, Glenn DuBois, characterized developmental education as "the biggest roadblock we face to achieving our strategic goals." This redesign effort predated the TAACCCT grant; however, the grant provided funding to continue implementation of the redesign and provide PD for developmental education faculty on the new curriculum.

- **Strategy 5: E-HLTH Career Studies Certificates (CSCs).** The grant supported a range of E-HLTH training and certificate programs in health fields at a subset of Virginia community colleges. The content and duration of these courses and programs vary by college, with some offering credit and noncredit courses under the E-HLTH program. This strategy is intended to prepare community college students for employment in the state's growing health care industry.

- **Strategy 6: Workforce Enterprise System (WES).** The Workforce Enterprise System (WES) is a newly developed statewide web-based enterprise system funded by the grant to streamline the registration and management processes for noncredit courses. The system is

designed much like an online "shopping cart" experience, where users can browse the array of noncredit courses offered by colleges around the state on workforce or community service topics. Through this strategy, the VCCS is able to disseminate course listings across its colleges, improving its services to both displaced workers looking for training programs and employers looking to design training programs for their employees.

- **Strategy 7: Question Information Navigator (QUINN).** QUINN is a statewide "decision support system" designed to link together various postsecondary administrative data systems to produce standardized dashboards and other customizable reports to inform decision making by faculty, administrators, and other community college staff. QUINN was initially funded by the VCCS office and one college; the grant allowed for the continuation of all implementation phases and the training of users across all Virginia community colleges through December 2015. QUINN currently features five modules: finance (including college-level expenditure and revenue data); students, student finance, and financial aid (including student-level demographic characteristics, academic performance, tuition and financial aid data); and human resources (including employee-level data such as demographic characteristics).

Appendix B includes detailed profiles of each strategy, as well as an accompanying logic model documenting the inputs, activities, and intended outputs and outcomes.

Implementation evaluation overview and key findings

We designed the implementation evaluation to achieve two primary objectives. First, we sought to describe implementation of each of the seven strategies. To do this, we drew upon data from (1) strategy descriptions, progress reports, and other relevant documents; (2) telephone interviews with coaches from all colleges, consortium leads for each strategy, and steering committee members from select strategies; and (3) focus groups and in-person interviews with college-level strategy leads, faculty, students, coaches, workforce staff, and employers from five colleges selected for site visits. We present the data sources used to inform our analysis of each strategy in Table ES.1. Second, after collecting data on each strategy, we synthesized the information to identify challenges, successes, sustainability approaches, and lessons learned across the strategies. We provide additional detail on our data collection and analysis methods in Appendix A.

Table ES.1. Data sources

	Document review	Telephone interviews			In-person interviews					Focus groups		
		Consortium strategy leads	Coaches	Strategy steering committee members	College grant managers and strategy leads	Developmental education faculty	Coaches	Workforce development staff	Employers	E-HLTH students	Developmental education faculty	Displaced workers
Coaches	X	X	X		X		X	X	X	X		X
Wizard	X	X	X		X		X	X		X		
SAILS	X	X	X		X	X	X				X	
Developmental education	X	X			X	X					X	
E-HLTH	X	X	X		X		X	X	X	X		X
WES	X	X		X	X			X				
QUINN	X	X		X	X							

Analysis of these data across colleges and all types of respondents revealed several key findings detailed in subsequent chapters. These findings reflect the experiences and opinions of those we spoke to during our data collection and are not necessarily representative of all TAACCCT grant stakeholders.

> *Career coaches and job coordinators have strengthened collaboration between colleges and the workforce development system to better serve clients; however, sustaining these connections will require additional resources after the grant period (Chapter II).*

The introduction of coaches shifted the nature of the relationship between the community college and workforce development systems from a referral-based relationship to a more collaborative one. Career coaches and job coordinators were hired to provide coordinated service delivery to students and, in particular, veterans, trade-affected and other displaced or low-skilled workers across the previously disparate education and employment systems. Collaboration with the workforce system has allowed coaches to more easily identify new clients, connect clients with wraparound services, and identify sources of funding for training and supportive services.

The type and extent of collaboration between community colleges and the workforce system varies across the VCCS. Coaches credited their placement at workforce centers (rather than at the colleges) and their own relevant past work experience as keys to facilitating collaboration across the systems. They also cited strong communication about expectations for the coaching role from both the VCCS and college leadership as contributing to their success. When these factors were present, coaches were considered key partners by their American Job Center (AJC)

colleagues, and both groups reported strong collaboration in the form of coordinated service delivery and employer outreach. At the few colleges where these facilitating factors were not present, coaches reported less collaboration with AJC staff, with communication between the two groups consisting primarily of referrals without the benefit of coordinated service delivery.

Although most coaches considered themselves successful in increasing collaboration with the workforce system, they expressed uncertainty regarding the future of their roles because their positions were grant funded. Despite this uncertainty, coaches and their supervisors were hopeful that their colleges would identify additional sources of funding to maintain the positions. AJC staff also hoped that the coaching positions would be sustained following the grant period to ensure the continued coordination of service delivery. Grant managers at each college reported seeking alternative funding sources to sustain the positions beyond the grant period.

> *Although E-HLTH was conceived as a statewide strategy, it was not implemented at all colleges in the system due to college-specific barriers related to resources, time, and misalignment with the target population's training needs (Chapter III).*

Although it was envisioned as a statewide strategy, E-HLTH was ultimately implemented at only 13 of Virginia's 23 community colleges. In June 2013, consortium leadership notified colleges via email that E-HLTH program implementation would occur at the college level, rather than at the VCCS level as originally planned, and instructed colleges to implement their own E-HLTH program as soon as possible. Consequently, grant managers and E-HLTH leads from the five colleges selected for site visits (from among the 13 implementing schools) reported modifying existing programs to meet grant obligations instead of developing new training programs. Based upon administrative data provided by consortium leadership, the other ten colleges chose not to implement an E-HLTH program under the TAACCCT grant altogether, as confirmed by coaches during the phone interviews.

College-level grant managers, E-HLTH strategy leads, and coaches from the five site visit colleges cited several barriers to implementing E-HLTH as intended. First, they described the time and costs associated with developing new programs, including lengthy accreditation processes, as impeding their ability to design and implement an ideal E-HLTH program. Additionally, some reported that their areas' local Workforce Investment Board (WIB) did not deem health-related occupations to be in demand; therefore, college leaders did not believe it was appropriate to develop training programs in those fields. Another cited barrier was that the programs were not well aligned with the needs of veterans, trade-affected and other displaced or low-skilled workers. They felt that the courses are not sufficiently intensive to prepare students to enter the health care fields and are thus better suited as continuing education courses to enhance the existing skills and knowledge of workers already employed in those fields. Further, in addition to inadequately preparing students for health-related employment, these stakeholders reported that technological barriers, the long program timeline (compared to quick-turnaround, noncredit training programs), and a hesitancy of the target population to change occupations all serve as barriers to enrolling them in E-HLTH programs.

> *Colleges are adopting new technology platforms to increase students' ability to plan coursework and register for noncredit courses, faculties' ability to alert students to course progress, and administrators' ability to make informed decisions, although they face challenges sustaining use of these platforms after the grant ends (Chapter IV).*

The TAACCCT grant funded the development of or enhancements to several statewide technology platforms to improve student outcomes and enhance efficiency, including the Virginia Education Wizard (Wizard), Workforce Enterprise System (WES), Student Assistance and Intervention for Learning Success (SAILS) Early Alert System, and Question Information Navigator (QUINN). Although the VCCS developed the infrastructure for these platforms at a state level, the platforms have varying degrees of customizability; colleges have been making progress toward tailoring them to meet their specific needs.

To support implementation for these platforms, the VCCS and its colleges are working to develop organizational capacity through training staff and generating buy-in from intended users. The VCCS has launched Wizard trainings customized for different audiences, such as a demonstration to show instructors how to implement the Wizard in a classroom environment. For SAILS, college-level implementation teams provide in-person training to college staff on the platform's purpose and how to best implement components at the college level with support and resources from the VCCS. Finally, the VCCS has provided college-level training and supports to assist with implementation of WES and QUINN, including webinars and visits to sites needing additional implementation assistance around information technology (IT) issues.

Colleges expressed concerns about the sustainability of SAILS, WES, and QUINN beyond the grant period, because it will depend on ongoing investments within each college and from the VCCS. Responding to student concerns raised through SAILS requires time and staff resources, both of which are in limited supply, especially at smaller colleges. Small colleges also expressed similar concerns regarding their ability to implement and maintain WES and QUINN without ongoing support from the VCCS. In particular, they voiced concerns with both the technical difficulties associated with linking data systems and the need to develop a culture of data-driven decision making. Despite these challenges, however, a majority of stakeholders see SAILS, WES, and QUINN as worthwhile investments and are taking steps to fully implement them and ensure their sustainability. The sustainability of the Wizard was not called into question, in part, because it was developed and integrated into community college services prior to the grant.

> *The integration of three strategies—redesigned developmental education courses (including faculty PD), SAILS, and the Wizard—around the VCCS vision and framework for student success facilitated implementation and may help to sustain these strategies moving forward (Chapter V).*

Through interviews with college developmental education faculty, SAILS leads, and the consortium strategy leads, we learned that three strategies—redesigned developmental education courses, SAILS, and the Wizard—were successfully integrated at a state and college level through shared goals and messaging, anchored by Achieve 2015, and further supported by the

PD component of the developmental education redesign. These three grant-funded strategies were inserted into the broader Achieve 2015 vision for "student success," defined as increasing the number of students who successfully complete their community college program and/or transfer to a university. In response to this statewide plan, all colleges then developed an individual plan to describe how they would implement new or expand existing services, technologies, or other supports, including some funded by the TAACCCT grant, to achieve student success. In this sense, Achieve 2015 helped colleges develop a common language for implementing these otherwise separate initiatives in support of their goals.

At the heart of the VCCS student success framework is a set of statewide courses deemed imperative to students' success in future college-level courses, including grant-funded redesigned developmental education courses in math and English, as well as "gateway courses," including student development (SDV) courses. These courses utilize the Wizard and SAILS platforms in their efforts to improve student success. The Wizard is used in the SDV curriculum to help students with college and career planning, a major emphasis of the course. Further, SAILS was rolled out in both developmental education and SDV courses in order to focus supports on students deemed most at risk of failing or dropping out. Both the Wizard and SAILS also are emphasized as part of the PD for developmental education and SDV instructors. The PD offerings help reinforce the common goals and approaches between the developmental education and SDV courses and the grant-funded strategies that support them. Wizard, SAILS, and developmental education PD are intentionally tied to one another and to other community college programs and structures; this may help to make these strategies more sustainable in the future.

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I.   INTRODUCTION

The Trade Adjustment Assistance Community College and Career Training (TAACCCT) grants, funded by the U.S. Department of Labor (DOL), provide community colleges with funding to enhance their ability to provide education and training programs for veterans (as well as eligible spouses), trade-affected and other displaced workers.[2] In particular, the TAACCCT grants aim to fund initiatives that accelerate progress for low-skilled and older workers, improve retention and achievement to reduce time to program completion, build programs that meet industry needs, and strengthen online and technology-enabled learning.

In 2011, DOL awarded Tidewater Community College a $24 million Round I TAACCCT grant to implement "Virginia RETHINKS Health Sciences Education" on behalf of the 23 colleges in the Virginia Community College System (VCCS). The grant was designed to focus on health occupations after the VCCS identified health as a growth field with job openings across the state and confirmed that gaps existed in the community college system's ability to train interested students.

The VCCS' investments under the grant are also part of a broader effort by the VCCS to reorient community colleges to serve the needs of the state's student populations. Virginia's community colleges face many of the same challenges as colleges across the nation, including fluctuating student enrollment, increasing need for developmental education, and declining state funding. As reported in the grant application, as of 2009, only one in four of the state's developmental education students graduated or transferred to a four-year college within four years of original enrollment, further reflecting the need for a new approach to developmental education and related student support services. The state therefore developed a strategic plan— Achieve 2015—to address these challenges, in part by redesigning developmental education and using technology to serve its students more efficiently.

A. Grant overview

The VCCS designed the Virginia RETHINKS Health Sciences Education grant to achieve three broad goals in alignment with both the TAACCCT priorities and the VCCS' objectives for Achieve 2015: (1) improve student outcomes, (2) build connections to the workforce, and (3) improve efficiencies at colleges. To meet these goals, the VCCS proposed seven strategies to directly affect the educational options and support services available for students, as well as to invest in technological infrastructure to enhance the operations of the colleges and thus indirectly improve academic outcomes. The strategies include redesigning and creating curriculum in core and health-related courses, offering in-person counseling and mentoring to help students navigate careers and succeed in the classroom, and launching several technology platforms both to help students navigate careers and coursework and to help faculty and staff support students in pursuit of these goals.

The seven grant strategies include the following:

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[2] Moving forward, the term "veterans" refers to both veterans and eligible spouses.

- **Strategy 1: Adult Career Coaches (ACCs) and Experiential Learning/Job Placement Coordinators (ELJPCs).** Under the grant, colleges received funding to hire ACCs and ELJPCs. ACCs serve community college students and other clients from the community, through career coaching and advising to assist them in enrolling in and completing appropriate coursework. ELJPCs identify opportunities with employers and connect clients with those opportunities through placement services. This strategy was adopted to help veterans, trade-affected and other displaced or low-skilled workers—who tend to be older and in need of a career change—to connect with training opportunities at the community colleges and overcome barriers to reemployment. ACCs and ELJPCs are generally referred to as "coaches" throughout this report.

- **Strategy 2: Virginia Education Wizard.** Initially implemented in 2009, the Wizard is an automated tool designed to help Virginians explore careers, educational options, and educational costs, and to identify and apply to the state's public institutions of higher education. The grant funded the development of two modules for the Wizard: the course and career planners. The new modules were intended to fill gaps in student supportive services.

- **Strategy 3: Student Assistance and Intervention for Learning Success (SAILS) Early Alert System.** The grant fully funded the development and implementation of SAILS, a communication system that provides faculty with a means of directly contacting students and support services staff about students' academic progress. The goal of the early alert system is to improve student retention and success.

- **Strategy 4: Redesigned developmental education curriculum, including faculty professional development (PD).** The VCCS' redesigned developmental education courses in mathematics and English are intended to reduce the need for remediation, ease the transition to college courses, and increase credential attainment, graduation rates, and transfers to four-year colleges and universities. In a keynote address at the 2011 National Association for Developmental Education (NADE) Conference, the chancellor, Glenn DuBois, characterized developmental education as "the biggest roadblock we face to achieving our strategic goals." This redesign effort predated the TAACCCT grant; however, the grant provided funding to continue implementation of the redesign and provide PD for developmental education faculty on the new curriculum.

- **Strategy 5: E-HLTH Career Studies Certificates (CSCs).** The grant supported a range of E-HLTH training and certificate programs in health fields at a subset of Virginia community colleges. The content and duration of these courses and programs vary by college, with some offering credit and noncredit courses under the E-HLTH program. This strategy is intended to prepare community college students for employment in the state's growing health care industry.

- **Strategy 6: Workforce Enterprise System (WES).** The Workforce Enterprise System (WES) is a newly developed statewide web-based enterprise system funded by the grant to streamline the registration and management processes for noncredit courses. The system is designed much like an online "shopping cart" experience, where users can browse the array of noncredit courses offered by colleges around the state on workforce or community service topics. Through this strategy, the VCCS is able to disseminate course listings across its colleges, improving its services to both displaced workers looking for training programs and employers looking to design training programs for their employees.

- **Strategy 7: Question Information Navigator (QUINN).** QUINN is a statewide "decision support system" designed to link together various postsecondary administrative data systems to produce standardized dashboards and other customizable reports to inform decision making by faculty, administrators, and other community college staff. QUINN was initially funded by the VCCS office and one college; the grant allowed for the continuation of all implementation phases and the training of users across all Virginia community colleges through December 2015. QUINN currently features five modules: finance (including college-level expenditure and revenue data); students, student finance, and financial aid (including student-level demographic characteristics, academic performance, tuition and financial aid data); and human resources (including employee-level data such as demographic characteristics).

Although these strategies can be viewed as independent efforts, the VCCS designed them to work together in support of common goals. As described in the consortium's grant application, the consortium selected a health focus based on the number of projected job openings in each of the state's local workforce investment areas (LWIAs). After selecting this industry focus, the VCCS sought to address gaps in training options, community college capacity, and supportive services to prepare workers for employment in relevant career fields, as illustrated in the theory of change presented in Figure I.1. Under the E-HLTH strategy, the VCCS intended to increase health-related training options across the state, given the projected openings in health fields. Through the coaching strategy, clients could access academic and career planning support, for example, by using the Wizard to learn about career and training options such as E-HLTH programs. Once enrolled in training, the college would support a client through grant-funded enhancements to college programming, including WES, SAILS, and redesigned developmental education. Finally, upon completion of a training program, a client could work with his or her coach to identify potential employment options.

Figure I.1. Service roadmap for clients served under the TAACCCT grant

B. Implementation evaluation

In 2014, Tidewater Community College contracted with Mathematica Policy Research to conduct an implementation and outcomes evaluation of the grant. The implementation study, which is the focus of this report, describes implementation of each strategy at the colleges as well as cross-strategy findings to inform future implementation efforts and potential replication and scaling of program strategies both within and outside the VCCS. The ongoing outcomes study will assess, where possible, the extent to which aspects of the TAACCCT grant improved student education and employment outcomes.

Although the grant funded seven strategies, we focused most of our implementation data collection efforts on a subset of strategies meeting the following criteria: (1) most likely to affect student outcomes, (2) fully implemented by the evaluation's start date (May 2014), and (3) not being examined under ongoing or future evaluation efforts. This report presents key findings on the implementation of all seven strategies, with particular emphasis on coaches, the Wizard, SAILS, E-HLTH, and the faculty professional development component of the developmental education redesign. Although we present findings from WES and QUINN in Chapter IV, the VCCS was still rolling out both strategies at the time of our data collection; thus, we are only

able to present early implementation findings for those strategies. We will describe findings from the outcomes evaluation in a separate report.

1. Research questions

The following research questions guided data collection for the implementation study:

1. What problems is the strategy trying to solve?

2. What types of clients/students is the strategy designed to serve?

3. How and where is the strategy being implemented? How does implementation vary across colleges? Has the strategy been implemented as intended? What factors facilitate or serve as barriers to implementation? How might implementation be improved in the future?

4. How will the strategy be sustained after the TAACCCT grant ends?

5. How do the strategies interact to improve VCCS services to students?

2. Data collection and analysis

We employed multiple qualitative data collection methods for this analysis. We present them in Table I.1 as they correspond with each subsequent report chapter. First, we conducted background calls, collectively and individually, with the consortium strategy leads and other key consortium leaders. These calls provided us with background information needed to draft logic models and inform protocols for subsequent data collection activities. Second, we completed telephone interviews with ACCs and ELJPCs from all colleges. Third, we conducted site visits to five colleges, selected because they are diverse in terms of size, urbanicity, geography, and their implementation of the strategies (as learned during our earlier phone interviews). Site visits included interviews with college faculty and staff, AJCs, and employers, as well as focus groups with developmental education faculty, E-HLTH students, and ACC and ELJPC clients. Finally, we reviewed program documentation and progress reports and conducted follow-up telephone interviews as needed to provide additional details on strategy implementation. Our analysis and subsequent findings reflect the experiences and opinions of those we spoke with through phone interviews and site visits. Although we interviewed ACCs and ELJPCs from each community college and visited a diverse set of colleges, our findings are not necessarily representative of all TAACCCT grant stakeholders.

Table I.1. Data sources

	Document review	Telephone interviews			In-person interviews					Focus groups		
		Consortium strategy leads	Coaches	Strategy steering committee members	College grant managers and strategy leads	Developmental education faculty	Coaches	Workforce development staff	Employers	E-HLTH students	Developmental education faculty	Displaced workers
Coaches	X	X	X		X		X	X	X	X		X
Wizard	X	X	X		X		X	X		X		
SAILS	X	X	X		X	X	X				X	
Developmental education	X	X			X	X					X	
E-HLTH	X	X	X		X		X	X	X	X		X
WES	X	X		X	X			X				
QUINN	X	X		X	X							

3. Key findings and roadmap for the report

Based upon our analyses, we identified four key findings. The remaining chapters in this report are organized around these findings.

- Chapter II presents findings from our analysis of coaches, including ACCs and ELJPCs. The introduction of coaches occurred across all colleges and served as the strategy that touched the most trade-affected workers. We find that coaches have strengthened collaboration between colleges and the workforce development system to better serve clients, including trade-affected workers; however, sustaining these connections will require additional resources after the grant period.

- Chapter III presents findings on the implementation of E-HLTH. E-HLTH was envisioned as a statewide strategy intended to meet the needs of those facing career changes. However, we learned that E-HLTH was not implemented at all colleges in the system, as the program vision changed due to college-specific barriers related to resources, time, and misalignment with the target population's training needs.

- Chapter IV describes implementation of technology platforms, including the Wizard, SAILS, WES, and QUINN. These platforms seek to increase students' ability to plan coursework and register for noncredit courses, faculties' ability to alert students to course progress, and administrators' ability to make informed decisions, although they face challenges sustaining use of these platforms after the grant ends.

- Chapter V describes the ways in which redesigned developmental education courses, SAILS, and the Wizard were successfully integrated at a state and college level around the VCCS vision and framework for student success as well as through the professional

development component of the developmental education redesign. We find that integration of these strategies facilitated implementation and may help to sustain these strategies moving forward.

In each chapter, we also examine the extent to which the strategies and collaboration facilitated by them can be sustained following the grant period.

Appendices include further information regarding data collection and analysis methods, as well as information on the strategies themselves. Appendix A details our data collection methods and the analyses conducted to identify key findings. Appendix B includes profiles of each strategy, as well as an accompanying logic model documenting the inputs, activities, and intended outputs and outcomes for each strategy. Each profile provides an overview of the strategy; its goals, target population, and staff involved in implementation; a summary of strategy implementation at colleges; and an assessment of implementation successes and challenges. For some profiles, we also include recommendations suggested by stakeholders during the interview process.

II. STRENGTHENING COLLABORATION BETWEEN COMMUNITY COLLEGES AND THE WORKFORCE DEVELOPMENT SYSTEM: FINDINGS FROM STRATEGY 1

This chapter describes the introduction of ACCs and ELJPCs in community colleges, collaboration between the colleges and the workforce development system, and the future of the coaching role. Through phone interviews with ACCs and ELJPCs from each of Virginia's 23 community colleges, as well as in-person interviews conducted during site visits to five schools, the study team explored the scope of collaboration and the implications for service delivery. Findings in this chapter represent the views of ACCs and ELJPCs, workforce development staff, and other community college staff members, such as grant managers and strategy leads, included in our data collection efforts.

> *Key finding: Career coaches and job coordinators have strengthened collaboration between colleges and the workforce development system to better serve clients; however, sustaining these connections will require additional resources after the grant period.*

A. Serving clients through ACCs and ELJPCs

Under the Virginia RETHINKS Health Sciences Education grant, community colleges hired 68 ACCs and ELJPCs to support prospective and current community college students, particularly veterans, trade-affected and other displaced or low-skilled workers. Among the 68 individuals hired under the grant, 26 were designated as ACCs, 22 as ELJPCs, and 20 as joint ACC/ELJPCs. Under the guidelines specified in the grant proposal, ACCs would help prospective community college students explore available training options at the local community college. In this capacity, ACCs would administer career aptitude assessments through the Virginia Education Wizard (also discussed in Chapters IV and V) and would assist clients in understanding local labor market information, including locally in-demand occupations. Based upon the grant guidelines, clients would then transition to working with an ELJPC. The ELJPC would assist clients with their job search and could help connect clients about to complete training to potential employers in the local community. Although the grant envisioned the ACC and ELJPC positions as having two distinct roles, conversations with ACCs and ELJPCs revealed that in practice their roles and responsibilities overlapped considerably, based upon various implementation factors explored in this chapter and further described in Appendix B. Given the blending of roles, we refer to ACCs and ELJPCs as "coaches" throughout the remainder of this report.

B. Collaboration between community colleges and the workforce development system

Prior to the grant, limited infrastructure existed to support coordinated service delivery to students and other community members by the workforce development and community college systems. American Jobs Center (AJC) staff indicated that they simply referred clients who wanted information regarding specific training programs to a community college representative. This representative could provide clients with information about admissions, financial aid, and available curricula, but was not responsible for providing individuals with coaching or career

guidance. Conversely, individuals who enrolled in community college programs directly did not receive information regarding services or funding options available through the workforce development system.

> "Out here, WIA case managers are spread kind of thin. Having these guys [coaches] helps tremendously. They find clients we wouldn't find. Coaches all have good relationships with our case managers…They help us out if there are things we can't do for clients."
>
> —AJC manager

The introduction of coaches at each of Virginia's community colleges through the TAACCCT grant shifted the nature of the relationship between the workforce development system and the community colleges from a referral-based relationship to a more collaborative one. Community colleges hired coaches to serve a range of clients, including current community college students and members of the local community, and to help these clients navigate the two systems so that they could access financial aid and courses available through the colleges as well as Workforce Investment Act (WIA) training funds and supportive services available through the AJC. According to the consortium's grant application, the strategy is intended to address the service needs and barriers to employment faced by clients, by providing them with services through the job placement service stage. By working together, coaches and AJC staff have been able to accomplish this goal by providing clients with additional services such as resume assistance, connecting clients with wraparound services, such as transportation and child care supports, and minimizing redundancies in service delivery.

To facilitate collaboration with workforce staff, coaches indicated that they reached out to AJC staff members to introduce themselves, explain their role, and develop working relationships. By doing so, coaches established a rapport with their AJC counterparts that allowed them to serve clients in a collaborative way. For example, one ACC reached out to the manager of the local AJC to see if there were any services missing in the AJC so that she could work to fill service gaps for clients. Consequently, she provided resume assistance to clients within the AJC, a service they did not previously offer. Through providing this service, she could also identify new clients. Other coaches reported using similar approaches for establishing connections with AJC partners.

At least one college took a different approach, with efforts to coordinate with the local AJC led by the coaches' supervisor. This individual is responsible for managing the college's adult education program and began supervising coaches following the introduction of the grant. In this capacity, she initiated collaboration with the local AJC by coordinating with the AJC manager. Both the supervisor and the AJC manger reported that high-level coordination facilitated collaboration between AJC line staff (such as WIA case managers) and coaches by ensuring that structures were put in place to coordinate service delivery to clients. For example, the AJC included a coach on its business services team that is responsible for coordinating employer outreach and services to business clients. At this location, the AJC manager and the coaches' supervisor established quarterly meetings between AJC line staff and coaches to facilitate structured collaboration across entities.

In addition to collaborating with AJC staff, coaches also worked to increase collaboration with other organizations in the local communities and to increase collaboration across community college departments. Coaches collaborated with staff from the Virginia Employment Commission (VEC) and the Department of Social Services. By working with these organizations as well as other departments within the community colleges, coaches could more easily identify new clients, connect clients with wraparound services, and identify sources of funding for training and supportive services.

The extent to which coaches have collaborated with various organizations and partners has varied according to factors unique to their colleges and local communities. The remainder of this section summarizes three models for collaboration, based on interviews with coaches from all colleges and interviews with AJC staff serving clients from a subset of colleges, describes factors that facilitated or hindered collaboration between colleges and the workforce development system, and provides client perspectives on collaboration.

1. Types of collaboration

Based upon responses gathered during site visit interviews with coaches and AJC staff members as well as phone interviews with coaches, we learned that the level of coordination between the community college and workforce partners during the grant period fell along a continuum that can be described as follows:

- **Referral-based coordination.** Under this approach, coaches were typically not co-located with workforce partners, even on a part-time basis. Although coaches referred clients to workforce partners to learn about other services offered, they did not work together to coordinate service delivery to clients.

- **Coordination to fill service gaps.** Coaches from colleges that followed this approach typically spent some time in the AJC each week and worked with staff from other workforce organizations to provide and/or connect clients with missing services, such as resume assistance. This model still relied heavily on referrals, but these were intended to connect clients with specific services to provide more comprehensive support than was otherwise offered under the pure referral-based model. The coordination worked in both directions; coaches could provide workforce clients with additional services not typically available in an AJC, and AJC staff members could connect community college students with educational funding sources aside from college financial aid.

- **Coordinated service delivery and employer outreach.** Through this approach, coaches not only coordinated with workforce organizations to fill service gaps and provide wraparound services as they did under the prior model, but they also (1) coordinated with the workforce development system through business services teams designed to conduct coordinated employer outreach and connect clients with employment opportunities and (2) provided coordinated case management through clients' enrollment in community college training programs. At one site, coaches even served on the local area's business services team to minimize redundancies in employer outreach. This form of collaboration helped to fill service gaps for clients, allowing clients to receive unified, rather than disparate, services across the workforce development and community college systems.

Our site visit colleges fell along different points of this collaboration continuum. One site visit college limited its coordination to referrals, as was business as usual before the grant. At this college, coaches and AJC staff were not co-located and there were no systems to share information across partners, leading to a referral-based relationship. Coaches from two other colleges reportedly coordinated to fill service gaps. At these two colleges, the coaches had previously worked in the workforce development system in some capacity and used both their prior knowledge of the workforce system and their existing relationships with workforce staff to coordinate services effectively. A fourth college reported working with the local AJC to fully collaborate on both service delivery and employer outreach. AJC staff members from this college reported that their large geographic area served made it difficult to reach clients, thus they saw collaborating with coaches as an opportunity to expand their reach and better serve their clients through coordinated service delivery and case management. At the fifth site visit college, we were unable to interview AJC staff members from the college's local area to enable us to characterize their level of collaboration.

2.   Factors influencing collaboration

Coaches described several common factors that influenced the type and level of collaboration that emerged between the community colleges and the workforce development system.

Role guidance. Coaches cited clear guidance regarding their roles and responsibilities from the VCCS and community college leadership as critical to succeeding in their roles. Specifically, coaches noted that this guidance helped clarify their roles in serving their clients, including the extent to which they should collaborate with the workforce development system.

Physical location.[3] Coaches' approach to service delivery and coordination with other entities varied based upon their physical location and, consequently, their access to different client referral sources. Coaches located in AJCs reported identifying clients through their relationships with AJC partners, whereas those located at community colleges reported identifying current students as clients. Although service location varied by coach, at least one coach provided services on campus at each of Virginia's 23 community colleges. Colleges employed three models for stationing coaches, which include the following:

- **Campus.** Through their locations on campus, coaches could serve students on a walk-in basis and could more easily coordinate with community college faculty and staff. This was the most commonly used model, with 26 coaches interviewed by phone indicating that they worked on campus full time.

- **AJC.** Some colleges opted to station coaches at the local AJC to facilitate coordination across service providers. Additionally, co-location at the AJC allowed coaches to identify potential clients, including hard-to-reach trade-affected clients. Working in the AJC also helped coaches connect their clients with supportive services such as child care and transportation benefits provided through other organizations in the local community. Only two coaches interviewed by phone interview indicated that they worked in the AJC on a full-time basis.

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[3] The counts included in this section capture information only for coaches who responded to questions regarding physical location. These data are missing for four coaches.

- **Campus and AJC.** Six coaches interviewed by phone indicated that they worked in the AJC part time. According to these coaches as well as AJC staff, this arrangement helped enhance service delivery by facilitating relationships among staff from different organizations.

Past work experience. Although coaches cited institutional considerations such as communication from college leaders and their physical locations as facilitating factors, they also frequently cited their own past work experience as key to success in their roles. About one-quarter of coaches indicated that they previously worked for an AJC partner program or organization such as WIA or the VEC. As a result, these individuals brought preexisting connections and networks to their role as a coach. They were already familiar with relevant services available in the community and understood where service gaps might exist. Consequently, in their capacity as a coach, they could provide clients with services they otherwise would not have received through the public workforce system. This past work experience also shaped these coaches' approaches to collaboration. Because they previously worked in the workforce development sphere, they tended to collaborate with workforce rather than community college partners.

3. Perspectives on collaboration

Telephone interview with coaches at all colleges, a focus group with coaching clients at one college, and in-person interviews with AJC staff at four of the five site visit colleges helped us gain some insight into the perceived benefits of collaboration.

Coaches described the benefits of collaboration with the workforce development system, particularly focusing on how collaboration facilitated the identification of clients and improved clients' access to services. Through working with AJC partners, coaches could identify additional clients who were otherwise not connected to community colleges. Collaboration also allowed coaches and workforce partners to provide clients with wraparound services such as higher-intensity case management and career counseling. Because the grant did not fund training or supportive services for clients, such as transportation benefits, coaches relied on workforce partners to connect clients with these kinds of funding. Figure II.1 shows how frequently coaches cited each of these benefits of collaboration with the workforce development system.

Figure II.1. Coaches' reported benefits of collaboration with workforce partners
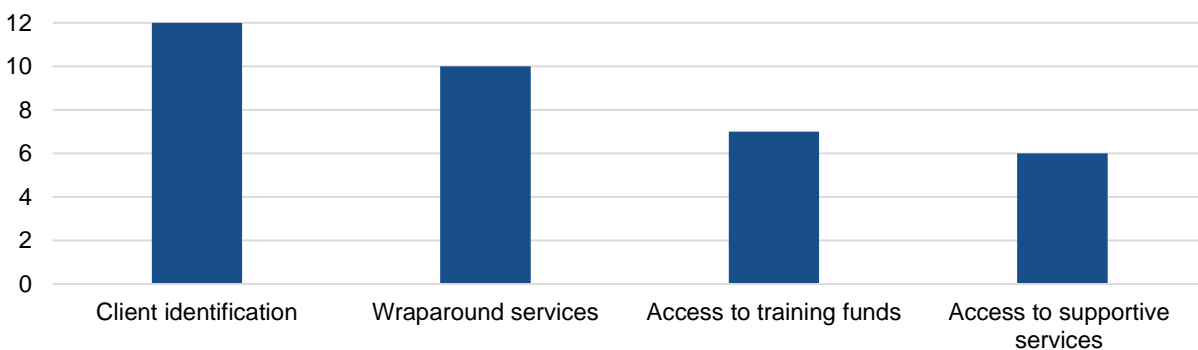
Source: Phone interviews with 38 coaches, representing each of Virginia's 23 community colleges

Although AJC case managers at site visit colleges and coaching clients participating in focus group at one of these colleges also viewed collaboration between the community college and workforce development system as beneficial, they focused primarily on the type and delivery of services offered by coaches as being integral to client success. AJC case managers reported that coaches have flexibility to provide clients with more comprehensive and personalized supports than is typically available through the workforce system alone. Although AJC case managers provide some ongoing support to clients, they face more constraints than coaches and typically have neither the time nor the flexibility to go out into the community to meet with clients. Conversely, coaches can meet with clients at convenient locations outside of the office and also support clients in more personal ways, for example, by attending events like clients' training graduations. They also continue to follow up with clients during and after their training programs. Focus group coaching clients reported meeting with both a coach and workforce case manager, but they felt that they receive more intensive support from their coaches than from their case managers. They indicated that this kind of personal support is especially helpful, as adults facing career transitions typically do not receive such intensive and personalized support and encouragement from staff of other programs.

> "As a parent, you're always being the supporter, it's nice to have someone just want to support you. She's [my coach is] a listening ear when you're stressed out. She just lets me lay everything out. I'm the strong point for everyone else, and it's nice to have someone you can talk to. [As a parent,] [p]eople come to you for support and then when you need someone you don't have many people you can turn to. This has been a burden off my shoulders and she's always there willing to help. She gave opportunities, told me about what's around, and within a week I had a part-time job."
>
> – Coaching client

C. Sustainability of coaching

Although coaches considered themselves successful in increasing collaboration with the workforce system, they expressed uncertainty regarding the future of their roles because the positions were grant funded. Despite this uncertainty, coaches as well as their supervisors were hopeful that their colleges would identify additional sources of funding to maintain the positions. Grant managers and workforce development staff—and AJC line staff in particular—also hoped that the coaching position would be sustained following the grant period. AJC line staff reported that coaches helped them fill service gaps and, as previously described, sometimes were integrated into the AJC's approach to service delivery. Although grant managers were uncertain regarding the sustainability of these positions at the time of data collection, they reported that they were seeking alternative funding sources to sustain the positions beyond the grant period.

III. VARIATION IN E-HLTH IMPLEMENTATION: FINDINGS FROM STRATEGY 5

In this chapter, we describe the consortium's initial vision for a statewide E-HLTH strategy and its actual implementation. Key data sources included E-HLTH enrollment data provided by the VCCS, interviews with E-HLTH strategy leaders, and a focus group composed of E-HLTH students. We describe barriers to E-HLTH implementation and long-term sustainability of the programs as perceived by strategy leadership and other stakeholders.

> *Key finding: Although E-HLTH was conceived as a statewide strategy, it was not implemented at all colleges in the system due to college-specific barriers related to resources, time, and misalignment with the target population's training needs.*

A. Designing an E-HLTH program

Through the E-HLTH strategy, consortium leadership intended to develop a statewide E-HLTH training and certificate program that would be implemented across all of its 23 community colleges. The program was envisioned as a combination of credit and noncredit health science courses, some of which would be offered online. Consortium leadership had two overarching goals for the strategy: (1) to create a pipeline that would help veterans, trade-affected and other displaced or low-skilled workers transition to careers in the growing health care industry and (2) to support and fill growing labor needs among the state's health-related employers. The online instructional model was intended to meet the needs of nontraditional students who were thought to need increased flexibility for completing such programs.

Although E-HLTH was envisioned as a statewide strategy, consortium leadership encountered barriers in selecting a single program that would meet the needs of all colleges. As described by the consortium strategy lead, consortium leadership originally developed plans for three possible E-HLTH Career Studies Certificate (CSC) programs (Health IT, Electronic Health Records (EHR) System Consulting, and EHR System Engineering) and surveyed all of the state's community colleges to solicit input on these proposed programs and each college's broader E-HLTH curriculum needs. According to the strategy lead, no consensus emerged, leading the consortium to abandon its original objective of implementing a statewide E-HLTH program.

In June 2013, consortium leadership notified colleges that they needed to design or modify an E-HLTH program to satisfy the consortium's obligations under the DOL-funded TAACCCT grant. The consortium gave colleges the option to implement one of six programs of study to satisfy their E-HLTH obligations, including the three CSC programs endorsed by the consortium and three additional non-CSC programs. Alternatively, colleges could request approval to redesign an existing program as E-HLTH. To receive approval, colleges were to complete a form providing information regarding the courses included in the curriculum and the applicable certification, and submit it for approval by consortium leadership.

Colleges implemented E-HLTH differently based upon their existing curricula, student populations, and perceived employer needs. Some colleges opted against implementing the E-

HLTH strategy altogether, despite guidance from consortium leadership that they were required to do so. Ultimately, 13 of Virginia's 23 community colleges implemented some type of E-HLTH CSC program (Table III.1).

Table III.1. E-HLTH CSC programs offered

Community college	Industry	Instructional format	Number of active programs	Total enrollment
Blue Ridge CC	Medical Coding Associate and/or Specialist	Hybrid [a]	2	63
Eastern Shore CC	Health Information Technology and Services	Hybrid	0	0
Germanna CC	Pharmacy Technician; Nurse Aid Program	Hybrid	1	0
Lord Fairfax CC	Health Information Technician	Hybrid	1	48
Mountain Empire CC	Health Information Management; Medical Office Coding/Procedures; Medical Records Technician; Certified Billing and Coding	Hybrid; Hybrid-Compressed; Online	3	47
New River CC	Health Information Management; Medical Coding	Online; Online/Hybrid	0	22
Northern VA CC	Health Information Technology	Online	1	4
Paul D. Camp CC	Electronic Records Systems Engineering; Medical Office Coder/Reimbursement Specialist; Medical Office Administrative Assistant	Hybrid	1	6
Southwest VA CC	Electronic Medical Records Specialist; Billing and Coding Specialist	Online; Hybrid	1	7
Tidewater CC	Electronic Health Records Consulting; Billing and Coding; Electronic Health Records System Consulting; Electronic Health Records System Engineering	Hybrid	2	47
Thomas Nelson CC	Healthcare Information Technology Office Specialist; Healthcare Information Technology Systems Specialist; Medical Coding & Billing Specialist		3	54
Virginia Highlands CC	E-Health Science	Hybrid	1	64
Virginia Western CC	Health Records Coding	Hybrid	1	80

Source: E-HLTH enrollment data provided by Tidewater Community College, as of spring 2014.

[a] A hybrid program includes both classroom and online instruction

B. Models for implementing the E-HLTH strategy

Few college E-HLTH leads and grant managers with whom we spoke viewed the grant as an opportunity to develop new programs, instead reporting that their colleges instituted E-HLTH programs to comply with grant objectives. Once colleges received guidance from consortium leadership to implement E-HLTH at the college rather than state level as originally intended, individual colleges selected programs that could be quickly implemented, given start-up delays. Consequently, grant managers at site visit colleges reported working with college E-HLTH leads, who were typically faculty members, to take one of the following approaches to meet the grant's E-HLTH objectives:

- **Adjusting existing programs.** Four of the five site visit colleges reported tweaking existing programs to fit the E-HLTH model, upon receiving approval from consortium leadership. At

these colleges, E-HLTH leads reviewed existing programs within the college to determine how to best comply with grant requirements. The first college chose to change the name of an existing course, deemed by consortium leadership to meet grant requirements, to reflect its E-HLTH designation. The second college adapted an existing course, medical records coding, to comply with the E-HLTH guidelines by changing the instructional model from a pure classroom-based course to a hybrid model consisting of both classroom and online instruction. The strategy lead from this college believed that the hybrid model would be appealing to students who were working part time or facing child care challenges. The third college also adapted existing courses and adopted a hybrid instructional model. At the fourth college, coaches suggested that the college also redesigned existing courses to meet E-HLTH guidelines, though we did not speak with the college E-HLTH lead or relevant faculty members to gather additional details on the nature of these changes.

- **Developing new programs.** The fifth site visit college developed a new E-HLTH program in response to the grant. The E-HLTH lead from this college first reviewed the six programs suggested by consortium leadership to satisfy the E-HLTH strategy. After reviewing them, the E-HLTH lead selected the consortium's proposed electronic health records coding program and looked to see how other colleges structured similar programs to determine which courses should be included in their CSC program.

C. Barriers to E-HLTH implementation across colleges

Given the change in approach for the E-HLTH strategy, E-HLTH and grant leads from site visit colleges commonly described the time and costs associated with developing new E-HLTH programs as barriers to doing so at their schools. At each college, new programs must go through departmental and college-level approval processes; many colleges did not feel they had time to secure such approvals for a new program on a short timeline. Additionally, new programs must go through an external accreditation process, which is also long and costly, leading some colleges to believe that new programs are difficult to implement through grant funding.

Responses from site visit interviews with E-HLTH leads and grant managers, phone interviews with coaches, and a focus group with E-HLTH students suggested, however, that college-level barriers to E-HLTH implementation would have existed regardless of time and resource constraints. These conversations allowed us to identify common implementation barriers across the VCCS' 23 colleges, including the ten colleges that did not implement E-HLTH.

1. Lack of alignment with employer and student needs

In addition to describing the high costs as prohibitive to creating a new E-HLTH program, coaches from the ten colleges that did not implement an E-HLTH program suggested that they did not do so because these programs were not aligned to their local industries' needs and/or the career interests of local students. At seven of these colleges, the area's local Workforce Investment Board (WIB) did not deem health-related occupations to be in demand; coaches from these colleges reported that college leaders did not believe it was appropriate to develop training programs or courses that were not aligned with the area's industry mix. Coaches from these and the other colleges that did not implement E-HLTH also noted that students in their communities rarely expressed interest in E-HLTH fields, likely because there were few nearby jobs. If

students did express interest in health-related employment, coaches from four colleges reported referring clients to Northern Virginia's online E-HLTH program, as instructed to do so by consortium leadership.

Similarly, grant managers and E-HLTH leads interviewed at site visit colleges and coaches at the 13 colleges that did implement E-HLTH also expressed concerns regarding the extent to which their colleges' E-HLTH programs would satisfy local employers' needs and improve students' employment outcomes. These stakeholders explained their concerns as follows:

- **Employer needs.** Among the 13 colleges that did implement E-HLTH, coaches and other stakeholders expressed ongoing concerns regarding the program's alignment with local employer needs. As detailed in the grant application, the consortium conceived of the E-HLTH strategy in response to employment projections indicating that health care would be a growing field across the state. Therefore consortium leadership believed that E-HLTH programs could meet employers' needs for trained health care workers in Virginia. Yet college staff, specifically grant managers and coaches, noted that many health-related fields are still emerging and it is unclear what credentials jobs in those fields will require. Some coaches also reported that although health care is a major industry in their areas, employers tend to need individuals trained in direct care, such as nurses, rather than individuals trained through E-HLTH. Interviews with local health care employers further supported this assessment, as they reported working with coaches to fill direct-care positions.

- **Students' employment needs.** Given these broader concerns regarding E-HLTH's alignment with employer needs, coaches, college grant managers, and other college staff voiced concerns regarding students' ability to secure employment in related fields at the conclusion of these programs. First, they were uncertain that E-HLTH programs would adequately prepare students for employment in health fields. Grant managers from three colleges reported that the programs were not intensive enough to adequately prepare students for available health care jobs, nor was the content well aligned with these occupations. Rather, they believed that the courses were more appropriate as continuing education for those already employed in the health care industry. Second, stakeholders believed that many local employers are unlikely to hire students who have completed E-HLTH programs. Coaches from two colleges noted that local employers prefer to train existing employees rather than hire new workers trained via the community college. The composition of our focus group with E-HLTH students illustrated this; about half of the students enrolled in the E-HLTH designated medical record coding course were already employed in the health care industry, and their employers provided them with tuition assistance for the course. Staff from four colleges also reported that for E-HLTH programs to adequately prepare students for employment, they must also include internships, as employers are unwilling to hire students without related work experience. However, creating internships requires buy-in from employers, which staff from two site visit colleges perceived as challenging.

2. Lack of suitability for veterans, trade-affected and other displaced or low-skilled workers

During site visits, including a focus group with E-HLTH students, and telephone interviews with coaches from all community colleges, stakeholders offered the following reasons why E-HLTH programs may not be suitable for this target population in Virginia:

- **Technological barriers.** According to coaches, trade-affected and other displaced workers tend to have lower education levels and also lack basic computer skills typically required in online courses. Further, coaches from one rural community college noted that internet access in the area is not reliable, which presents challenges for enrolling in E-HLTH courses.

- **Program length.** Coaches believed that veterans, trade-affected and other displaced workers are more interested in shorter-term training programs. E-HLTH programs are for credit and therefore tend to be longer than noncredit training options. As a result, coaches felt these programs were not an appealing or suitable option for these clients, as they want to quickly return to employment.

- **Hesitancy to change fields.** According to coaches, trade-affected and other displaced workers also express concern regarding working in health care fields. Coaches believed that these clients are accustomed to being employed in traditional blue collar fields, such as manufacturing. Entering a health care profession would be a large cultural change for these individuals, and coaches expressed reservations about their clients' ability or willingness to make this career change.

During two focus groups (one with E-HLTH students and the other with displaced workers, including two veterans), participants confirmed these factors as barriers to enrolling in E-HLTH. E-HLTH students viewed technology as a barrier; all focus group participants preferred a traditional instruction model to the hybrid model (combining classroom and online instruction) used in the E-HLTH-designated course. Displaced workers also expressed their desire to enroll in quick-turnaround training programs that would allow them to quickly become reemployed. About half of the displaced workers came from manufacturing fields and were uninterested in health-related fields. These participants seemed to be fearful of making a large career change. Of the participants who were interested in health-related fields, most expressed interest in direct patient care rather than the health fields targeted through the E-HLTH program.

D. Sustainability of E-HLTH

Despite implementation challenges, E-HLTH leads and grant managers across site visit colleges reported that E-HLTH programs would continue beyond the life of the grant. Because colleges tended to rely on existing structures and staff, sustainability of E-HLTH programs would likely not require any additional resources. These respondents suggested that the future success of E-HLTH CSC programs will likely depend upon the extent to which students continue to enroll in and complete them and whether graduates are able to find employment in their fields. Given concerns about E-HLTH employment outcomes, one college reportedly plans to redesign its program to better meet employer needs. Another college spent considerable time designing its E-HLTH program prior to the grant; therefore, the college already has the infrastructure and enrollment necessary to sustain the program.

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IV. BUILDING TECHNOLOGY PLATFORMS AND DEVELOPING ORGANIZATIONAL CAPACITY TO IMPLEMENT THEM: FINDINGS FROM STRATEGIES 2, 3, 6, AND 7

In this chapter, we provide a brief overview of the Wizard, SAILS, WES, and QUINN technology platforms and explore key findings related to their implementation at the college level. The chapter is informed by (1) a review of key background documents on each strategy; (2) phone interviews with consortium leads for all strategies and steering committee members for WES and QUINN; and (3) in-person interviews with community college grant managers, strategy leads, and other staff, as well as a faculty focus group conducted during site visits. We describe each technology platform, with special attention to the customizability of each at the college level, and explain how the VCCS and colleges have worked together to build capacity to implement and use the platforms through trainings and technical assistance. The chapter concludes by evaluating the sustainability of each platform based on the current effort involved in implementation and the expected amount of resources available after the grant period ends.

> *Key finding: Colleges are adopting new technology platforms to increase students' ability to plan coursework and register for noncredit courses, faculties' ability to alert students to course progress, and administrators' ability to make informed decisions, although they face challenges sustaining use of these platforms after the grant ends.*

A. Implementation and customization of technology platforms

Although each technology platform is aligned with the grant's broad goals, each of these platforms targets different populations and is intended to fulfill specific technology needs. In Table IV.1, we describe these differences, as well as the staff involved in implementation at the VCCS and in colleges.

Table IV.1. Overview of grant-funded technology platforms

Technology platform	Description	Goal	Target population	Staff involved in implementation
Virginia Education Wizard	An online automated academic and career planning tool	To help users explore careers, educational options and costs, as well as to identify and apply to the state's institutions of higher education, with particular emphasis on community colleges	Virginians who are current and prospective college students	*Director of student support technologies* who oversees implementation at the VCCS level, including conducting trainings and developing materials to facilitate usage; *Student development course (SDV) instructors* who incorporate the tool into their course instruction; *Coaches* who use the tool as part of their service delivery to clients
Student Assistance and Intervention for Learning Success (SAILS) Early Alert System	A communication tool that provides faculty with a means of directly contacting students and support services staff regarding concerns related to academic performance, attendance, or class participation	To increase student retention and other outcomes by communicating concerns to students and providing them with resources for support	Students in developmental education courses who are at greater risk for dropping out or failing, such as first-generation college students, though the system is expanding to serve all students in additional courses	*College-level SAILS leads* who oversee implementation; *Faculty* who raise flags and confer kudos on students; *Student support staff*, such as advisors, retention specialists, and success coaches, who contact students to address flags
Workforce Enterprise System (WES)	A newly developed statewide web-based platform designed to streamline the registration and management processes for noncredit courses	To increase student enrollment in noncredit courses and improve revenues through better course management	Current community college students as well as potential students who live out of area or who are apt to "shop" online for courses	*State-level project director and implementation team* including project managers, a functional and technical lead, and customer/user representatives; *Steering Committee,* led by the *Vice Chancellor for Workforce Development* and comprised of representatives from the VCCS workforce development, fiscal services, and information technology divisions; *College VPs for workforce development* who lead implementation at a college level through core implementation teams (CITs); *College IT staff* who customize and maintain the system for each college
Question Information Navigator (QUINN)	A statewide "decision support system" that links together various data systems to produce standardized dashboards and other customizable reports to inform decision making by faculty, administrators, and other community college staff	To ensure that data are reported and used in a consistent and meaningful way to support decision making	Decision makers at all levels	*State-level project director* supported by *VCCS institutional research staff*; Part-time *state-level IT project manager* and *IT support staff* to design and implement system; *Steering Committee* comprised of representatives from the Academic and Student Affairs Committee, the Administrative Services Committee, the Tech Council, the Internal Audit Committee, and Institutional Research Committee, as well as representatives from colleges

The VCCS developed the infrastructure for these technology platforms at a state level, however the platforms have varying degrees of customizability and colleges must decide how to tailor them to meet their specific needs, and develop capacity to implement them. The remainder of this section describes how these platforms are being rolled out at the college level.

Wizard is a statewide technology platform, but colleges must promote its use. As explained by the strategy lead, the VCCS designed the online Virginia Education Wizard to mimic an "Expedia.com-type" experience, where the system knows both your origin ("where you are") and destination ("where you want to go") in terms of academic and career planning. The technological infrastructure for Wizard is standardized across all colleges, though colleges must provide data on students captured in PeopleSoft, their Student Information System (SIS). When students log in, the

> "When I was introduced to the Wizard, I thought this was everything I had ever wanted."
>
> –VCCS director of student support technologies, who manages the Wizard

platform helps them with future planning based on courses completed thus far. Wizard includes several modules, including course planning, career planning, paying for college, and parent information, which includes tools to help parents plan for their children's college education. Wizard predates the TAACCCT grant, although the grant supported the development of the career and course planning modules added in spring 2013.

Colleges are responsible for incorporating the Wizard into their course offerings and support services. Student Development (SDV) course instructors integrate relevant Wizard modules into their instruction, as discussed further in Chapter V. All students enrolled in SDV courses use the Wizard, since the college and career planning modules are required components of SDV courses. College counselors also use the tool in one-on-one sessions to help students map out their academic and career plans. Similarly, coaches consistently use the Wizard as part of their service delivery to clients, as described in Chapter II. Though the platform is technically open to users outside the community college system, none of the workforce partners with whom we spoke during site visits reported using the Wizard or integrating it with their Management Information System (MIS) or assessment programs used at AJCs, such that case managers could not view student results on Wizard career assessments. The coaches with whom we spoke suggested that tools available at AJCs are better suited to adults or trade-affected workers, perhaps explaining their lack of enthusiasm for the Wizard.

Most Wizard users reported that the tool is useful for planning community college coursework and exploring career paths, as intended. Coaching clients from one community college reported that the Wizard helped them think about what they really wanted to do with their lives and made them consider career options they would not otherwise have considered. However, users perceive the tool to be more useful for younger, traditional students just beginning their careers than for trade-affected or displaced workers seeking employment in the short term. The latter group was less likely to utilize the tool or be satisfied with the results generated by the career planning tool, as many felt that the tool encouraged them to pursue careers that were not of interest to them.

The SAILS platform is standardized, but colleges have some flexibility in its use. The SAILS platform is supported by Starfish Early Alert software, purchased by the VCCS to be standardized across all colleges. The platform is preset with specific flags and kudos (see Table IV.2) for communicating student concerns and successes, respectively, with accompanying standardized email templates sent from the instructor to the student. The platform also includes an attendance feature that allows instructors to record and track attendance of each student, which the instructor may use to identify students who should be flagged for attendance concerns. All colleges piloted the platform in fall 2013 in developmental education courses, followed by a uniform rollout to gateway courses (introductory courses in core subjects) in fall 2014. Following this start-up period, colleges were given latitude to expand system usage to additional courses if desired. To date, 13 VCCS colleges have rolled out SAILS to all courses.

Table IV.2. SAILS flags and kudos

Tracking type	Name	Description
Flag	Assignment concerns	Student receives low scores on assignments
	Attendance concerns	Student missed classes or tardiness
	General concern	Concern unrelated to another flag
	In danger of failing	Student in danger of failing and requires immediate intervention
	Low participation	Low participation in class
	Low quiz/test scores	Student receives low scores on quiz or test
	Never attended	Student never attended the course section
Kudo	Keep up the good work	Encourage a student to keep working hard and producing positive results
	Outstanding academic performance	Congratulate a student on producing excellent work
	Showing improvement	A student is showing improvement from previous performance or behavior
System flag	Three or more active flags	The system raises an alert automatically if a student has three or more flags or five or more flags in order to identify students with the most issues in their classes
	Five or more active flags	

Further, colleges are granted flexibility to emphasize different features of SAILS. Although the primary function of SAILS is to identify and support students with various academic concerns using flags, some colleges have utilized the kudos and attendance features more than others. At several of the colleges we visited, the number of kudos that faculty confer exceeds the number of flags raised. One SAILS lead explained that they had intentionally emphasized the kudos feature during trainings as a way to provide positive motivation to students. At another college, the SAILS lead reported that faculty found the attendance tool very helpful and got a positive response from students when they gave kudos, causing the practices to spread throughout the campus.

Colleges also have different interpretations about the purpose of raising and clearing flags and, as a result, have developed different processes. For example, colleges vary in terms of who first responds to a raised flag. Two variations in responses include:

- Faculty are asked to make contact with the student regarding the issue before raising a flag, and then once the flag is raised, the support staff attempt contact with the student.

- Faculty raise a flag for any relevant issue and then are asked to document their attempts to reach the student in SAILS and clear the flag if they are able. The support staff will reach out to the student only after seeing documentation that the faculty member has made attempts without success.

Colleges also vary in terms of when and how often flags are cleared. At one college, assigned support staff clear the flag once they have had the chance to speak with the student or after a few days of unsuccessfully trying to reach the student (10 days is the longest a flag will go uncleared). Therefore, a cleared flag does not mean that the issue has been resolved, it simply means that it has been addressed. At another college, staff are hesitant to clear flags, because they assume that a cleared flag means that the problem is resolved. Therefore, most flags at this college are left active through the end of the semester. These two approaches for clearing flags lead to different college rates for raising flags and subsequent responses to those flags. At a college where flags are cleared more frequently, a new flag will be raised again each time the concern comes up, and the support staff and/or instructor will make subsequent contact with the student.

Though some of the site visit colleges said they wished they had more flexibility to customize the platform (as described in Appendix B), SAILS is viewed by most faculty and staff with whom we spoke as a worthwhile approach to improving students' access to support, ultimately improving student retention. Users feel that SAILS is an easy-to-use platform that has increased the frequency and consistency of communication between faculty and student support services. Additionally, SAILS has provided a common framework for faculty and staff to think about student success, and a way for both groups to document their efforts in helping students achieve it. Instead of each group viewing the other as a completely separate entity, SAILS has helped them envision themselves as working toward the same goals. Finally, the increased communication through SAILS also provides faculty and support staff with better context for supporting students, by allowing support staff to see issues that a student may be having in classes and enabling faculty members to communicate with colleagues teaching the same student to identify common concerns and coordinate a response.

> "SAILS has had a positive impact on faculty interactions with student services staff. It's helped everyone become aware of different staff members and what they do... SAILS has improved their ability to work together to facilitate positive outcomes in the classroom. That message resonates with them."
>
> – College SAILS lead

The WES platform features are standardized, but colleges must customize the system for their own course offerings. The VCCS purchased an off-the-shelf product for WES; as with the Wizard, colleges are responsible for linking the system to their SIS (PeopleSoft). Colleges must also decide how to classify noncredit courses for display on their website and are responsible for entering data on these course offerings and enrollments, as well as processing

registrations, payments, and refunds. Colleges also will continue to be responsible for marketing these courses to potential students.

Despite buying a complete product, the VCCS must roll it out in stages to account for each of the front- and back-end requirements, and has encountered some delays in doing so. Despite the implementation delays, the limited feedback we received on WES was overwhelmingly positive. College workforce development staff are excited about the platform and hope it will be fully implemented as soon as possible. One college's vice president of workforce development said WES will "greatly enhance" the college's ability to manage noncredit courses. He noted that key features of the platform make it possible to easily update course descriptions, allow for online course registration, facilitate marketing of courses, and make it easier to comply with reporting requirements. These college workforce development staff, as well as the consortium strategy lead, see these benefits as particularly valuable for smaller colleges with limited resources.

> One college vice president of workforce development reported that college staff are supportive of WES and "less scared of technology than in the past" after transitioning over to PeopleSoft, which he described as "traumatic," even causing some staff to retire so that they would not have to make the transition.

In addition to improving management of noncredit courses, the consortium strategy lead explained that WES will also support data-driven decision making by making it possible to more easily analyze data on noncredit student enrollment and expenditures. As described below, the VCCS is in the process of integrating these data with the QUINN decision-support system. However, despite this benefit, one college vice president of workforce development expressed concern that they will continue to be burdened with processing paper and telephone registrations for noncredit courses to meet the needs of their local population. The college assumes that colleges in rural areas and those serving more nontraditional students will not see a surge in online noncredit course registrations from their local communities. As such, more tech savvy regions stand to benefit disproportionally from the WES platform.

QUINN integrates data across various administrative data platforms, although colleges are able to generate their own reports and dashboards. QUINN is built on a "middleware" platform, called Pyramid, purchased by the VCCS to integrate data from the VCCS finance, human resources, and student support systems (including PeopleSoft), as well as the National Student Clearinghouse. The VCCS also plans to integrate data from WES and SAILS soon. The goal is for these data to be easily accessible to users across the VCCS by making it possible to generate customized reports and dashboards to support decision making at all levels.

As with WES, the QUINN implementation team has experienced a series of delays resulting from staff turnover and problems scheduling technical trainings for end users. Data dashboards

> "In creating QUINN, we democratized our data. It's not a new idea. I've worked in other systems where that was not the case…the datamarts never took off. They never fulfilled their promises. We're getting closer to it [with QUINN]."
>
> – QUINN project director

are currently available for five modules: finance, students, student finance, financial aid, and human resources. The VCCS creates automated dashboards on popular topics for each module, but colleges can also generate their own reports and dashboards to meet their individual needs. Though the platform is designed to be fully customizable for colleges, steering committee members reported that many colleges have not yet developed the capacity to develop their own dashboards, relying for now on the standardized reporting mechanisms developed by the VCCS.

The limited feedback we received on QUINN was mixed, though largely positive. Overall, the VCCS project director felt that college leaders at all levels, from presidents to deans to faculty, are excited about the system and are "using and talking about and questioning" how to use data effectively at their respective institutions. But one steering committee member said the platform still is not ideal, though it is an improvement. Describing the technology, he said, "It's not intuitive; it's probably not the best of what's out there on the market….it's light years ahead of where it was but has another light year to go."

B. Developing organizational capacity to implement technology platforms

Use of these technology platforms requires both the initial development of the platform itself and also development of organizational capacity for implementation. VCCS and colleges have been providing trainings and technical support to help stakeholders understand how to use the platforms, and also to generate buy-in. This section describes how VCCS and colleges are developing organizational capacity to implement these technology platforms.

Because the Wizard predated the grant, much of the organizational capacity for its use and implementation already existed within the VCCS and each community college and was used to introduce new, grant-funded features. Upon its introduction five years ago, all stakeholders, including faculty, staff, and counselors, received initial training on the system from the VCCS. Following the introduction of the grant-funded Wizard modules, VCCS staff launched additional training offerings to introduce stakeholders to the new features. These trainings included everyone from counselors to college presidents. Additionally, the VCCS customized training content for different audiences. In particular, SDV instructors received a demonstration explaining how to implement the Wizard in a classroom environment. The consortium strategy lead estimated that 300 trainings occurred in the year and a half following the introduction of the new features. Therefore, the VCCS was able to use its existing organizational capacity to introduce community college staff to the new Wizard features funded through the grant.

To support implementation for SAILS, the VCCS and its colleges are working to develop organizational capacity through training staff and generating buy-in. Colleges have pulled together SAILS implementation teams typically led by a dean or vice president with

members across several college departments, such as counselors, support and information technology (IT) staff, and faculty. The implementation teams are responsible for getting SAILS running on their campuses and providing in-person training to staff across their college with support and resources from the VCCS. These supports include weekly meetings and webinars to provide updates on SAILS, training materials, and technical assistance. Across sites visited, college SAILS leads reported that the responsiveness of the VCCS to questions and concerns has been a primary factor for supporting implementation. Further, college SAILS leads do not have to "reinvent the wheel" for their trainings, because the VCCS provides them with presentations and other templates. The weekly meetings have also facilitated sharing of ideas and resources across colleges.

The college-level SAILS trainings have focused on the purpose and importance of SAILS and provided step-by-step instructions for implementation. Colleges typically provided separate trainings to support staff and faculty, tailoring the instructions for using SAILS to the participants' roles in the process. Some colleges offered multiple trainings to faculty in different locations and at different times so that all faculty would have the opportunity to attend, including adjuncts who work full time off-campus. In addition to formal trainings, SAILS leads typically offered one-on-one assistance to faculty members who had questions about using SAILS or to adjuncts who were unable to attend trainings. SAILS leads from the colleges we visited reported that they received numerous questions regarding the process and timelines for completing progress surveys at the end of the semester. It is unclear whether information about progress surveys was not clear during the trainings or if users simply did not remember the process by the end of the semester when they needed to complete them. Otherwise, the volume of questions about basic features was relatively low. Overall, SAILS leads from select colleges reported that the trainings and technical assistance have helped faculty members become comfortable with and appreciative of the system and supported their use of flags and kudos.

As new platforms, WES and QUINN have required the VCCS to develop steering committees to facilitate system-wide implementation and provide training opportunities aligned with the needs of different user groups. The WES steering committee is led by the Vice Chancellor for Workforce Development, and is comprised of representatives from the VCCS' workforce development, fiscal services, and IT divisions. Similarly, the VCCS established a QUINN steering committee comprised of representatives from the VCCS Academic and Student Affairs Committee, the Administrative Services Committee, the Tech Council, the Internal Audit Committee, and Institutional Research Committee. Both steering committees have worked with colleges to implement these platforms, including facilitating training. Training for WES has included monthly webinars, communication with stakeholders via an online implementation calendar, and site visits to colleges needing additional

Stakeholders offered positive feedback on the training and support for WES and QUINN implementation to date.

Referring to WES: "It's been a very collaborative process"

Referring to QUINN: "They are coming by your side, accommodating your particular version [of the system]….what more can you ask for?"

implementation assistance. For QUINN, the VCCS has offered the colleges:

- Regional module-specific trainings via webinar each month

- A self-paced training on how to better use the data to support students

- A tool to assist colleges in writing queries to answer their specific research questions

- Two-day visits to smaller colleges, as needed

The QUINN site visits are intended to increase the number of system users and provide hands-on training by working alongside key stakeholders to develop customized data dashboards designed to address their specific needs.

> "They've got to want to use data rather than whatever tea leaves or chicken bones they're reading."
>
> – QUINN steering committee member

But getting people to use the QUINN system will take more than training—it requires a cultural shift as well. The project director believes there is still much work to be done to change the culture of data usage around the VCCS. "Even though we talk a lot about [using data], most people still believe that the IR [Institutional Research] director is responsible for conducting these types of analyses." Further, she believes that some IR directors, as well as the financial aid and human resources staff who previously maintained their own databases, are resistant to relinquishing control over the data. Another potentially limiting factor is the hesitancy of some upper-level administrators to take an active role in data analysis. Given these limitations, it will take time to shift mindsets and change the overall culture surrounding data access and usage around the VCCS before the system is operating at its highest potential.

C. Sustainability of technology platforms

Although the grant funded improvements to existing technology platforms or implementation of new ones, sustainability for most platforms will depend upon both technological and human capital investments within each community college, as well as ongoing support from the VCCS, particularly for small colleges. All of our site visit colleges noted that responding to SAILS flags requires time and staff resources, both of which are in short supply; the magnitude of this problem is expected to increase as implementation expands beyond developmental education courses. However, college staff believe that SAILS is a worthwhile investment and the platform will be sustained beyond the grant. Since the grant did not provide funding for the creation of new positions to support SAILS, at most colleges, staff have incorporated the use of SAILS into their existing responsibilities. One site visit college reported using its own funds to hire student success coaches to respond to SAILS flags. For WES and QUINN, steering committee members suggested that meaningful implementation among smaller colleges will require time to obtain buy-in among stakeholders, coupled with training to support the thoughtful use of the platforms' functionality. Some college workforce development staff also expressed technical concerns about linking the platform to their SIS. The strategy leads for both WES and QUINN emphasized that the VCCS is aware of these challenges and is taking

steps to support these colleges, including conducting site visits to higher-risk colleges, as described earlier in this chapter.

Unlike the other technology platforms funded by the grant, the Wizard and its features were embedded in community college operations prior to the grant and will continue beyond the grant period. The grant-funded features will remain part of the platform, but the population using the Wizard may change. Coaches were able to introduce new users, including older and displaced workers, to the Wizard. If these coaching positions are not sustained, these new users may not continue to use the platform, as the workforce development community has not adopted it.

IV. BUILDING TECHNOLOGY PLATFORMS AND DEVELOPING ORGANIZATIONAL
CAPACITY TO IMPLEMENT THEM: FINDINGS FROM STRATEGIES 2, 3, 6, AND 7   MATHEMATICA POLICY RESEARCH

30

V. INTEGRATION OF STRATEGY GOALS IN GRANT IMPLEMENTATION: CROSS-STRATEGY FINDINGS

This chapter describes the ways in which redesigned developmental education courses, SAILS, and the Wizard were successfully integrated at a state and college level through shared goals and messaging as well as through the professional development component of the developmental education redesign (hereby referred to as "developmental education PD"). Through site visit interviews with college SAILS leads and developmental education faculty, focus groups with developmental education faculty, phone interviews with the consortium strategy leads, and review of professional development agendas and college course descriptions and syllabi, we learned that these three grant-funded strategies were inserted into a broader VCCS strategic plan to increase the number of students prepared for a university or the workforce, and were viewed as part of the same effort. After this initial planning phase, our analysis suggests that the developmental education PD further supported the integration of these strategies as they were implemented. Therefore, though other grant-funded strategies, such as coaching, are also closely aligned, we chose to focus this chapter only on those strategies that were integrated through both the statewide strategic plan and the developmental education PD. At the conclusion of the chapter, we also discuss factors influencing the integration of these strategies beyond the grant period and next steps for the TAACCCT grant evaluation.

> *Key finding: The integration of three strategies—redesigned developmental education courses (including faculty PD), SAILS, and the Wizard—around the VCCS vision and framework for student success facilitated implementation and may help to sustain these strategies moving forward.*

A. Integration of courses and strategies within the broader VCCS student success framework

"Student success," defined as increasing the number of students who successfully complete their community college program and/or transfer to a university, is one of five major goals of Achieve 2015, the VCCS' six-year strategic plan. Specifically, the VCCS' goal is to triple the number of students graduating, transferring, or completing a workforce credential from 30,391 in 2009 to 91,173 by 2015 and to triple the success of students from underserved populations from 13,131 to 39,393 during the same time frame. In response to this statewide plan, all colleges developed an individual plan to describe how they would implement new or expand existing services, technologies, or other supports under Achieve 2015, including some funded by the TAACCCT grant, to achieve student success. In this sense, Achieve 2015 helped colleges develop a common language for implementing these otherwise separate initiatives in support of their goals.

At the heart of the VCCS student success framework is a set of statewide courses deemed imperative to students' success in future courses. These include grant-funded redesigned developmental education courses in math and English and "gateway courses" including student development (SDV) courses. Typically, students in developmental education also take an SDV course during their first semester to support these objectives. Together, these

courses are intended to teach skills needed for success in college, such as writing, critical thinking, study skills, and creating academic and career plans. They include the following features:

- Redesigned courses in developmental math are characterized by computer-based and self-paced curriculum guided by an instructor who has shifted from the role of a lecturer to a learning coach. In the redesigned developmental English course, reading and writing are now integrated across all courses, whereas previously they were distinct courses. Both developmental math and English courses follow a sequenced progression of skills, while also sharing some common skills and goals across subjects. For example, both English and math courses place an emphasis on teaching critical thinking skills and on identifying students at risk for failing and providing them with needed supports.

- Though not directly funded by the grant, SDV 100, a "College Success Skills" course, provides information about the college's support services (for example, tutoring, counseling, and advising) and teaches important skills and strategies aligned to those taught in developmental education courses to help students successfully progress through their courses. This is the most popular offering of the SDV courses and many colleges require that all entering students take it.

Two additional grant-funded strategies, the Wizard and SAILS, were designed to provide tools needed to support colleges in their pursuit of improving student success. As described in Chapter IV, the Wizard is an online, automated academic and career planning tool, and SAILS is a communication system providing faculty with a means of directly contacting students and support services staff regarding academic concerns. The Wizard is used in the SDV curriculum to help students with college and career planning, a major emphasis of the course. Additionally, SAILS was rolled out in both developmental education and SDV courses in order to focus supports on students deemed most at risk of failing or dropping out. Figure V.1 illustrates the intersections of developmental education courses, the Wizard, and SAILS within the student success framework.

Figure V.1. Integration of supports within developmental education and SDV
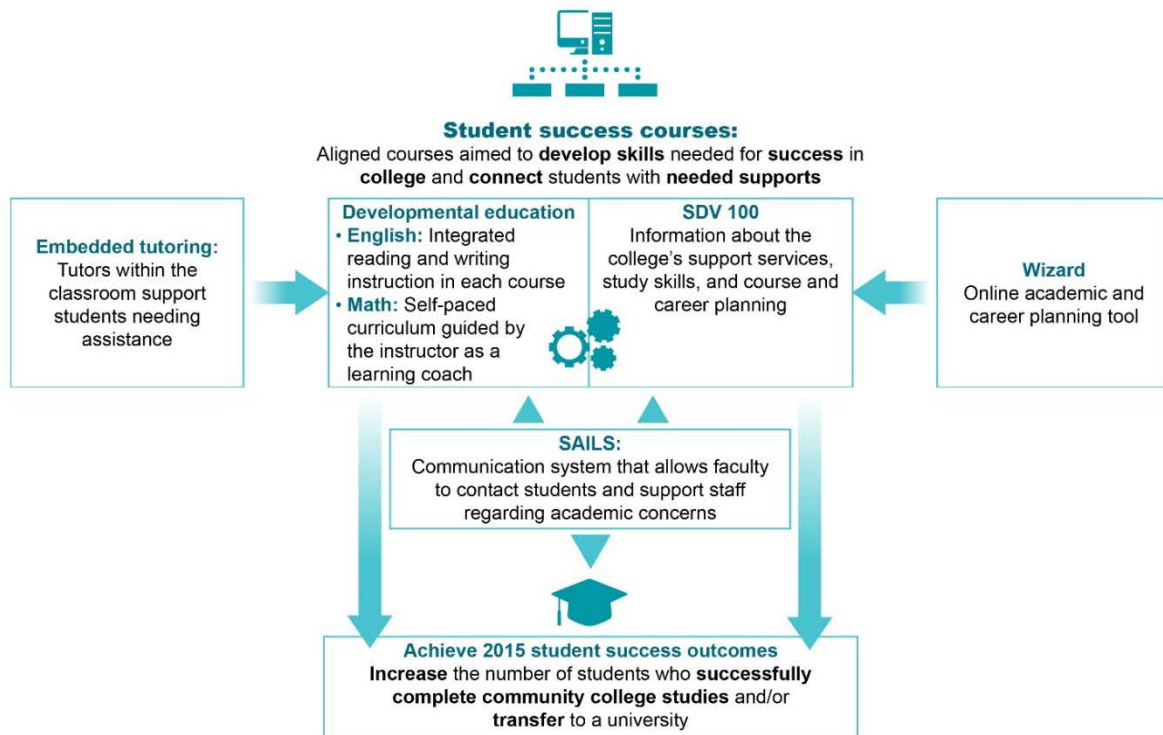
1. Integration of the Wizard into SDV 100

A major focus of SDV 100 is college and career planning. As an example, one college defines these objectives on its website as students being able to:

- Articulate three potential careers based on their interests, values, and abilities

- Articulate the step(s) they need to take in order to achieve their career goal(s)

- Select the appropriate curriculum based on their career goal(s)

- Develop an academic plan

The Wizard provides tools, including career assessments on skills, interests, and values, and a college planner to help students achieve each of these objectives. According to the VCCS Wizard lead and other stakeholders at community colleges, all students taking SDV courses are required to use the Wizard and to take certain assessments as part of their course requirements. When used within the context of SDV, the Wizard can also strengthen connections between the classroom and support services. Students no longer need to begin a conversation about career planning with an adviser or other support service staff. Instead, students can begin to craft a college and career plan guided by their SDV instructor and then have much more productive and substantive meetings with advisers, coaches, and others down the road. In this way, the Wizard provides the college with a common set of college and career planning steps that unifies the guidance that students receive inside and outside the classroom.

2. Integration of SAILS into SDV and developmental education courses

Before the introduction of SAILS, the redesigned developmental education courses and SDV already heavily emphasized the importance of connecting students to support services, so SAILS was a natural addition to these courses. Specifically, SDV 100 instructors provided information to students about the support services available at their campus during the course orientation, and developmental education courses featured the use of "embedded tutors" in the classroom to allow students to connect directly to supports within the classroom when necessary. The VCCS strategically rolled out SAILS at the system level so both developmental education and SDV course instructors would be early implementers. Colleges piloted SAILS with developmental education courses in fall 2013 and added SDV and other "gateway" courses in fall 2014. This approach enabled SAILS to first target students who were most at risk for dropping out, specifically those early in their college careers and/or those needing remediation.

> The purpose of SAILS is "to enhance students' success by giving an early alert email to students... First-generation students won't ask for help. The early alert system is trying to get students to let us help them. We're trying to get their attention; we don't want them to withdraw and we don't want them to fail."
>
> – College SAILS lead

Communications from the VCCS about SAILS focused on the same Achieve 2015 goals of student success as the developmental education and SDV courses, emphasizing the importance of reaching out to students in need of supports as a way of increasing retention and, ultimately, community college completion and university transfers. When asked about the purpose of SAILS, common responses heard from stakeholders were "enhancing student success" and "improving student retention." One site visit college even hired support staff called "success coaches" specifically to support the college's SAILS effort by contacting students with raised flags.

As implemented, SAILS aligned particularly well with the developmental math redesign. The new curriculum for the self-paced, computer-based course emphasizes analysis of students' progress toward course completion. Because all of a student's course activities are completed and tracked within the course management system, math instructors have access to much more data than in the past on students' progress over the course of the semester. This gives instructors an early opportunity to identify students who may be at risk for not completing the course or failing and to respond, either through directly referring them to tutoring or other campus supports, or sending alerts in SAILS.

B. Developmental education PD as a vehicle for integrating strategies and increasing collaboration

To support implementation of the redesigned developmental education courses in math and English, the VCCS designed a series of professional development opportunities to support faculty with the transition. The developmental education PD has included several types of events, including symposia, convenings of subject matter experts, a developmental education

institute, and other ad hoc convenings that are open to different groups of faculty. Other than the one-day symposium, which is open to all faculty, the developmental education PD events tend to target a smaller, select group of faculty. For example, the convenings of subject matter experts include one representative from each campus, and the developmental education institute includes 50 participants across all colleges selected through an application process. At the site visit colleges, department leads reported attending more VCCS statewide developmental education PD events than did other staff, and they shared with staff what they had learned during the events. Adjuncts typically attended the fewest events due to constraints of having another job and less flexibility with travel.

The PD sessions shifted over the course of the developmental education redesign rollout, from a focus on the curriculum changes to a focus on integration of other courses and strategies into the developmental education curriculum. According to developmental education faculty interviewed during site visits, in the early years, math sessions focused on details and logistics for implementing the new web-based curriculum, including scheduling, timelines, and policies, and also the importance of data analysis. English sessions focused on instructional design, integration of reading and writing instruction into each course, and higher-level thinking skills. The consortium strategy lead reported that recent developmental education PD sessions have focused more on common approaches and strategies across math and English developmental education and SDV courses, including the Wizard, SAILS, and QUINN.

Analysis of the agendas from the 2013 and 2014 developmental education symposia provides further evidence of how these strategies are intended to be integrated. The symposia included sessions on the purpose of strategies, such as the Wizard, SAILS, and QUINN, and how they relate to participants' classrooms. Other sessions focused on the need for integration of common approaches and collaboration across different departments of the community college. For example, the 2013 symposium included a session on common instructional strategies used in ENF 1 (an English developmental education course) and SDV 100, and a second session on the integration between academics and student support services in developmental math. In April 2014, the symposium included sessions on common strategies for teaching advanced thinking skills across different courses and collaboration between faculty and student services personnel. Figure V.2 illustrates how developmental education PD sessions during the 2013 and 2014 symposiums made connections across strategies and courses.

Figure V.2. Titles of developmental education PD sessions that made connections across strategies, courses, and departments
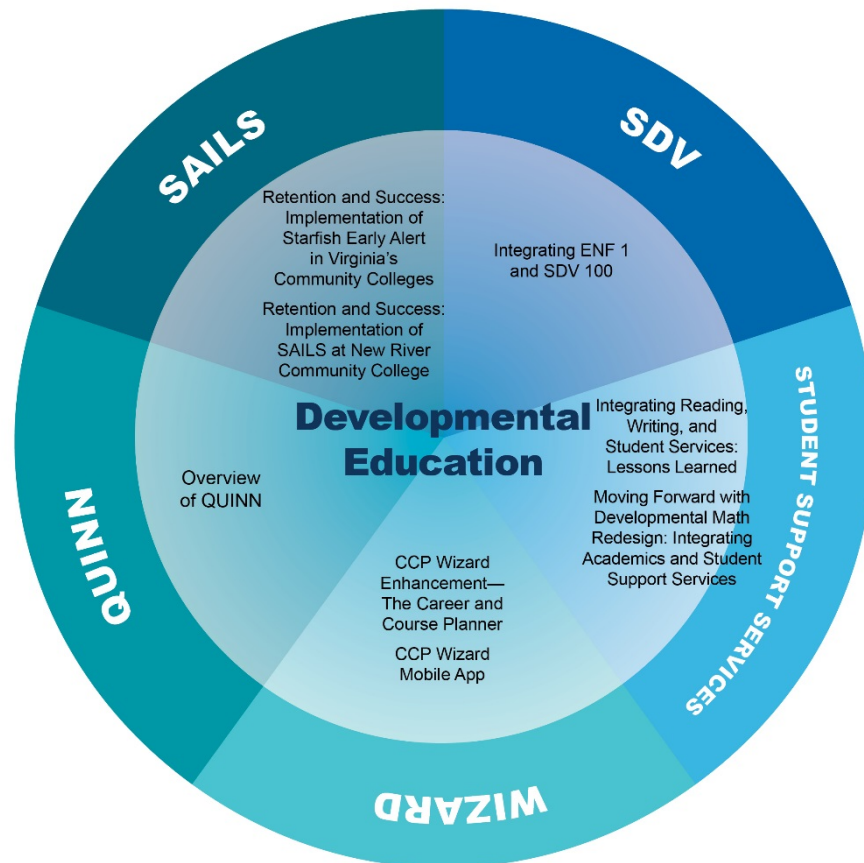
A review of the symposium agendas across years suggests that strategy integration has also benefited from the multiyear timeline of the developmental education PD. The rollout gave faculty time to learn the changes to the curriculum and implement them during the early years before thinking about how the curriculum fit with other courses and strategies. The multiyear timeline also allowed the developmental education PD to integrate strategies as they were rolled out. For example, because SAILS was first piloted with developmental education faculty, information about it could be included in the symposium in 2013 before colleges rolled out the technology to every course. Similarly, the VCCS incorporated information about QUINN into the symposium in 2014, since it had a later implementation timeline compared to some of the other strategies

C. Sustainability of strategy integration

Because the strategies described in this chapter are intentionally tied to one another and to other college systems and structures, future success and sustainability will depend on how well the strategies maintain these connections. If one piece of the connection is removed or decreases in its effectiveness, it will likely affect other pieces. For example, the success of the Wizard as a

course and career planning tool is currently dependent on its use in the SDV courses and in individual career planning sessions with coaches. If funding for the coaches ends or if students are no longer required to take SDV courses, this would reduce the usefulness of the Wizard as a tool for individual career planning. As described in Chapter IV, the success of SAILS as it is scaled up will depend on the support staff's ability to respond to flags raised in every course at the college. Without enough staff to respond to flags, faculty may find that raising flags does not result in action and will discontinue use.

Additionally, the success of both Wizard and SAILS will depend on continued training and use by instructors in relevant courses, which is currently being reinforced in the developmental education PD. As described earlier in this chapter, the purpose of the developmental education PD is not simply to teach participants about the redesigned courses; it is also intended to solidify the integration of developmental education and gateway courses with the Wizard and SAILS platforms. Therefore, if the VCCS discontinues these PD sessions, developmental education and SDV instructors may reduce their implementation of the Wizard and SAILS, particularly if colleges also terminate on-campus trainings for implementing these strategies. Future sustainability of SAILS, in particular, hinges on continuation of campus trainings and support to all users to ensure whole campus adoption. During interviews with developmental education faculty, we learned that the on-campus trainings helped instructors to better understand the purpose of the platform and how to use it. Without such training, instructors may not feel motivated or prepared to implement SAILS and the number of users may diminish over time. Future sustainability of both Wizard and SAILS will largely depend on the extent to which they continue to be adopted by intended users.

D. Looking ahead

This report documents the implementation of each grant-funded strategy across colleges and highlights some of the strengths and challenges of the implementation period. We also considered the sustainability of these efforts after the grant funding ends.

Understanding the implementation of the strategies is a necessary first step; however, it is also important to document, to the extent feasible, whether the strategies achieved the goals of promoting student success in school and the workforce. In the next phase of this evaluation, Mathematica will explore the academic and workforce outcomes of coaching participants and, if possible, compare them to the experiences of similar students who did not interact with the coaches. Additional evaluation efforts by other organizations are also underway, including an evaluation of the new developmental education curriculum. Looking across these evaluations will provide a more complete picture of the success of the grant.

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APPENDIX A:
METHODS

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Data collection

Given the multifaceted programming supported by the grant, coupled with a short timeframe for the evaluation, we began the data collection process by working with consortium leadership to learn about their priorities for the evaluation. Based on meetings with the consortium grant managers and strategy leads, we chose to focus most of our implementation data collection efforts on a subset of strategies meeting the following criteria: those (1) most likely to affect student outcomes, (2) fully implemented by the evaluation's start date (May 2014), and (3) not being examined under ongoing or future evaluation efforts. This report presents key findings on the implementation of all seven strategies, with particular emphasis on adult career coaches (ACCs) and experiential learning/job placement coordinators (ELJPCs), the Virginia Education Wizard, the Student Assistance and Intervention for Learning Success (SAILS) Early Alert System, E-HLTH, and the faculty professional development component of the developmental education redesign. Although we present findings from the Workforce Enterprise System (WES) and the Question Information Navigator (QUINN) in Chapter IV and in the strategy profiles included in Appendix B, the Virginia Community College System (VCCS) was still rolling out both strategies at the time of our data collection; thus, we are only able to present early implementation findings for those strategies.

During our initial meetings with consortium leadership, we determined that the implementation evaluation would focus on five key research questions:

1. What problems is the strategy trying to solve?

2. What types of clients/students is the strategy designed to serve?

3. How and where is the strategy being implemented? Does implementation vary across colleges? Has the strategy been implemented as intended? What factors facilitate or serve as barriers to implementation? How might the implementation be improved in the future?

4. How will the strategy be sustained after the Trade Adjustment Assistance Community College and Career Training (TAACCCT) grant ends?

5. How do the strategies interact to improve VCCS services to students?

After the initial meetings with consortium leadership, we conducted follow-up phone interviews with each of the strategy leads individually and reviewed background documents in order to develop logic models for each strategy. The proposed research questions coupled with the strategy-specify logic models served as the foundation for developing all remaining data collection instruments.

From May through December 2014, Mathematica conducted interviews and focus groups with 124 respondents (Table A.1). Each interview and focus group generally addressed one or two strategies, the goal being to obtain detailed information from the people most knowledgeable about each strategy. To that end, we collected data from college staff and students, as well as other key stakeholders across the state. These stakeholders included leaders who developed and coordinated the grant at the state level; people who implemented the strategies, such as instructors, deans, and coaches; workforce and employer partners; and community college students involved in the career coaching and E-HLTH strategies. We conducted the most interviews with ACCs and ELJPCs—48 respondents across all 23 colleges—because they were

hired as a result of the grant, served as "on-the-ground" field staff at each college, worked directly with program participants, and interacted with the workforce development system and key industries. The interviews generally lasted between 30 and 60 minutes and followed a semi-structured protocol aligned to priority research questions.

We also visited five colleges: Southside Virginia, New River, Virginia Western, Paul D. Camp, and Northern Virginia. We selected these sites for more in-depth data collection because they are diverse in terms of size, urbanicity, geography, and their implementation of the strategies. The structure of the visits varied across the colleges according to the extent of implementation of certain strategies at each college. For example, we conducted special focus groups at three of the five site visit colleges:

- **Southside Virginia:** a focus group with displaced workers, because of the relatively high percentage of trade-affected and displaced workers in the region

- **New River:** a focus group with developmental education faculty, because of their frequent use of SAILS and involvement in the professional development component of the developmental education redesign

- **Virginia Western:** a focus group with E-HLTH students, because of the college's strong enrollment in E-HLTH courses and the region's focus on health care industries

Although the visits to Paul D. Camp and Northern Virginia did not include targeted focus groups, we did conduct in-depth interviews with key stakeholders at these colleges to get feedback on strategies 1–5. Generally, site visit interviews lasted approximately 60 minutes and focus groups lasted 90 minutes. As with the phone interviews, site visit interviews and focus groups followed semi-structured protocols aligned to the research questions.

Analysis

After collecting the data, Mathematica developed coding structures in Atlas.ti (software for organizing and analyzing qualitative data) and Excel and used these codes for the telephone interview and site visit notes, respectively. Codes included the site, type of respondent, the strategy focused on, and the research questions addressed. We utilized Atlas.ti for the phone interview notes because it provided an efficient way to organize data from the 48 coaches interviewed. We could then create queries to answer questions such as "How many coaches said that they utilized the Wizard?" in order to quantify the responses. To analyze the site visit data, we created a spreadsheet template in Excel that allowed us to place sections of text in a cell aligned to its corresponding strategy of focus and research question. This allowed us to filter the spreadsheet such that we could focus on a particular strategy or research question and examine common themes across respondents. We used a deductive approach for both the phone interview and site visit coding; in other words, we determined the codes prior to reviewing the data, based on our key research questions. This helped to focus analysis on evaluation priorities and to relate emerging themes back to those priorities.

Following the coding, Mathematica researchers met several times as a group to discuss emerging themes both within and across strategies to inform the report. During these meetings, each team member presented findings from one or more strategies based on analysis of the notes

coded in Atlas.ti and Excel. We used the meetings to identify the need for additional data collection or to pose clarifying questions to respondents to finalize the analysis. They also provided a forum for other team members to ask questions and provide feedback on the emerging themes, which informed the final set of key findings presented in the report.

Table A.1. Number of respondents, by data collection activity

Primary strategy	Data collection activity	Site visit respondents[1]					Other community colleges	VCCS staff	Total respondents
		Southside Virginia	New River	Virginia Western	Paul D. Camp	Northern Virginia			
1–7	Interview with strategy leads[2]	0	0	0	0	0	0	6	6
1–7	Interview with grant lead[3]	0	1	1	2	0	0	0	4
1–2	Interviews with ACCs/ELJPCs	2	4	4	3	1	34	0	48
1	Interviews with workforce development staff	2	3	3	1	0	0	0	9
1	Interviews with employers	0	1	3	0	0	0	0	4
1	Focus group with displaced workers	10	0	0	0	0	0	0	10
2	Interview with state manager of Wizard	0	0	0	0	0	0	1	1
3	Interview with SAILS lead	1	1	2	1	1	0	0	6
3–4	Interviews and focus group[4] with developmental education faculty	0	9	3	2	0	0	0	14
5	Interview with E-HLTH lead	0	2	1	1	3	0	0	7
5	Focus group with E-HLTH students	0	0	6	0	0	0	0	6
6	Interviews with workforce development staff[5]	0	1	0	0	0	5	0	6
7	Interviews with QUINN steering committee members	0	0	0	0	0	3	0	3
Totals		**15**	**22**	**23**	**10**	**5**	**42**	**7**	**124**

Notes: The number of respondents does not correspond directly to the number of interviews. In some cases, two or more respondents participated in the same interview. Also, in two cases, a person had two roles and participated in two interviews. We have counted these individuals once in the interview most pertinent to their role.

[1] We interviewed some respondents from the five selected colleges by phone before or after the site visit.

[2] Each interview focused on the particular strategy led by a VCCS staff member. Because one of the strategy leads is responsible for two strategies, we conducted six interviews that covered all seven strategies.

[3] We were unable to arrange interviews with grant leads from two colleges.

[4] The focus group was held at New River. All other interviews in this category included one or two instructors.

[5] We conducted two types of interviews with workforce development staff, each having its own protocol. The first protocol focused on Strategy 1, the coaching strategy, and the second focused on Strategy 6, WES.

APPENDIX B:
STRATEGY PROFILES AND LOGIC MODELS

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ADULT CAREER COACHES AND EXPERIENTIAL LEARNING/JOB PLACEMENT COORDINATORS: STRATEGY PROFILE

The study team gathered information about implementation of this strategy through a review of background documents, phone interviews with the consortium strategy lead, phone interviews with adult career coaches (ACCs) and experiential learning/job placement coordinators (ELJPCs) from each of Virginia's 23 community colleges, and in-person interviews conducted during site visits to five colleges. The in-person interviews included a range of respondents, including the college grant managers and strategy leads, coaches from these colleges, workforce development staff, and employers, as well as focus groups with E-HLTH students and displaced workers. Findings in this profile represent the views of these respondents included in our data collection efforts and are not necessarily representative of all Trade Adjustment Assistance Community College and Career Training (TAACCCT) grant stakeholders.

A. Overview and goals

Under the Virginia RETHINKS Health Sciences Education grant, colleges hired 68 ACCs and ELJPCs to support prospective and current community college students and, in particular, veterans (as well as eligible spouses), trade-affected and other displaced or low-skilled workers pursuing retraining through the community college system.[4] Among the 68 individuals hired under the grant, 26 were designated as ACCs, 22 as ELJPCs, and 20 as joint ACC/ELJPCs. Under the guidelines specified in the grant proposal, ACCs would help prospective community college students explore available training options at the local community college. In this capacity, ACCs would administer career aptitude assessments through the Virginia Education Wizard and assist clients in exploring local labor market information, including understanding locally in-demand occupations. Based upon the grant guidelines, clients would then transition to working with an ELJPC who would assist them with their job search and help connect them with potential employers in the local community.

 Although the grant envisioned the ACC and ELJPC positions as two distinct roles, conversations with ACCs and ELJPCs revealed that their roles and responsibilities overlapped considerably in practice. Therefore, we refer to both positions as "coaches" throughout this report. At some community colleges, the roles were combined from the beginning. For example, coaches from one site visit community college noted that they combined roles because clients appreciated having one point of contact who could help navigate both the community college and the workforce system. Coaches from another college we visited reported that although they began in distinct roles as ACCs or ELJPCs, they found that the types of services provided by each position overlapped considerably, such that it was more efficient to combine roles for the remainder of the grant period.

Coaches from all colleges indicated that the goal of the coaching strategy is to help clients to secure post-training employment. In that capacity, coaches helped clients identify training options aligned with locally in-demand fields and occupations. Coaches from 13 community colleges also viewed helping clients identify coursework or educational opportunities as a

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[4] Moving forward, the term "veterans" refers to both veterans and eligible spouses.

primary responsibility. To that end, coaches sought to help clients increase their educational success, defined as successfully completing training, in order to increase future client success in the labor market.

B. Target population

The grant was intended to help Virginia's veterans, trade-affected and other displaced or low-skilled workers transition to employment through community college training programs coupled with academic and career support provided by coaches; however, coaches indicated that barriers existed in identifying and recruiting trade-affected workers. Coaches from 14 community colleges reported that this population is very small, requiring them to recruit lower-priority clients to maintain a full caseload. In areas with larger trade-affected populations, the nature of the coaches' relationship with the local Virginia Employment Commission (VEC) office, which oversees the (Trade Adjustment Assistance) TAA program, was reported to limit referrals of trade-affected workers to coaches for services. For example, coaches from eight community colleges noted that they had a weak relationship with the VEC, often due to lack of a VEC office in their service areas. Additionally, some coaches indicated that VEC staff were hesitant to refer clients to coaches. Although coaches were not certain why VEC staff resisted making referrals, they suggested that VEC staff might view serving trade-affected workers as their office's responsibility, rather than the coaches'.

Due to barriers in identifying and serving trade-affected workers, coaches from all 23 community colleges have reportedly "widened the net" to serve other types of clients, including older adults or displaced workers requiring some form of retraining. According to coaches interviewed, characteristics of clients served included:

- **Age.** Coaches reported working with clients across a range of ages, but they were more likely to have worked with nontraditional-age students, including older adults.

- **Education.** Although coaches worked with clients possessing a "range of education levels—anywhere from GED to master's degrees"—educational attainment levels varied across locations. Coaches serving rural areas more commonly reported serving clients with a high school diploma or equivalent. In contrast, coaches serving more urban areas reported serving clients with higher levels of education, such as a bachelor's and/or master's degree.

- **Work history.** Across colleges, coaches indicated that their clients have tended to be long-term unemployed or displaced workers. Such clients in rural areas often had previously worked in manufacturing or coal mining. Coaches from four community colleges often reported working frequently with first-time job-seekers.

C. Staff involved in strategy implementation

Coaches had primary responsibility for implementation of the strategy; however, consortium leadership and other staff within the community college regularly supported them. All coaches received training for their roles, including regular webinars delivered by consortium leadership throughout the grant period. Coaches from all colleges also participated in at least one in-person conference that addressed all facets of service delivery, including collaboration with the workforce development system. Coaches also received support from college-level supervisors and administrators in the form of written guidance and regular meetings.

Coaches reported collaborating with partners in the workforce development system, such as staff funded by the Workforce Investment Act (WIA), the VEC, and the Department of Social Services (DSS), though the nature of these partnerships varied depending on the physical location of coaches. At some colleges, coaches were placed full time at the colleges and at others they worked full time at the American Jobs Center (AJC); the remainder split their time between locations. Due to this variation in physical locations, coaches also varied in their approach to pursuing collaboration with partners. Coaches located at a community college reported collaborating with other community college staff members such as faculty or counselors. Those permanently located at the AJC, or who spent at least some time at the AJC, tended to work more closely with workforce partners. These coaches indicated that their location within the AJC allowed them to easily receive client referrals and identify different types of clients.

D. Steps in college-level strategy implementation

Coaches across community colleges were broadly tasked with identifying clients, determining their service needs, and providing education and career guidance services. Although all coaches shared the same overarching responsibilities, colleges varied in the approaches used to serve clients based in their region as well as in the types of clients being served.

1. Identifying clients

To identify trade-affected clients as prioritized by the grant (following veterans and eligible spouses), coaches from 13 colleges relied on referrals from VEC or AJC staff. In addition to receiving referrals from other workforce programs, coaches from nine community colleges also participated in Rapid Response events and were able to identify trade-affected clients through this participation. Rapid Response events occur when an employer has issued a notice that it will be letting workers go; representatives from different workforce programs attend employer-sponsored events to connect those about to be laid off with reemployment services. Coaches used similar approaches to identify non-trade-affected clients. For this population, new clients often sought assistance from coaches due to word-of-mouth referrals from current clients. AJC and community college staff also referred non-trade-affected clients to coaches. In addition, to appeal to a broader client base, coaches made presentations during classes or at community college events, such as new student orientation.

2. Determining clients' needs

The grant required all coaches to use the Wizard to identify clients' education and career needs; however, most coaches felt that other tools or approaches were more useful in identifying client needs. All clients complete Wizard profiles, but coaches found that the results from the Wizard's career planner were best suited for younger clients, such as high school students, rather than older workers. Consequently, coaches used other tools to help clients identify potential career options. Specifically, many coaches had previously worked in the AJC and were familiar with tools used there, such as the Bureau of Labor Statistics' career-matching tool O*NET, which they found to be beneficial in working with some client demographics. In addition to using established tools such as these, coaches often relied on conversations with their clients to determine their service needs and aptitudes for certain types of work.

3. Services provided

Coaches provided a range of services closely aligned with intensive services offered through the WIA program, which include career and academic counseling, as well as services intended to connect clients with potential employers. Coaches from all colleges reported working with clients to develop career plans similar to career planning services offered through WIA, as well as offering services to help clients fulfill their career plans. For example, coaches from 19 community colleges connected clients with experiential learning opportunities. Additionally, coaches from 13 community colleges worked to match clients with employers and/or job vacancies to secure longer-term employment. This process required coaches to contact employers directly to market their services and their clients. In addition to these one-on-one services, coaches also provided other services intended to help clients secure employment. For example, coaches from 19 colleges reported attending or hosting career fairs and/or offering workshops on topics such as resume writing and conducting a job search.

E. Implementation challenges and successes

Interviews with coaches from all 23 community colleges uncovered various strategy-related challenges and successes. Implementation challenges centered on the grant management structure, the ability to coordinate with the workforce development community, and the ability to serve their local client population. The need for coordination with the workforce development community could serve as an implementation barrier, but strong collaboration could also facilitate strategy implementation. Developing strong partnerships with both the workforce development community and other community college departments were cited by coaches from all community colleges as key factors facilitating strategy implementation. These implementation challenges and successes are described in more detail below.

According to coaches, the following factors served as implementation barriers for the coaching strategy:

- **Grant management and financial structure.** Coaches from more than half of the community colleges cited the grant management structure as an implementation challenge. Under the grant, coaches worked for individual community colleges, but the Virginia Community College System (VCCS) also provided guidance related to strategy implementation. Consequently, coaches often received conflicting guidance related to their job responsibilities and service priorities from their college and the VCCS. Additionally, some coaches believed the grant-related reporting requirements to be overly burdensome. Further, as coaches remarked, the grant provided funds to employ coaches, but coaches could not provide training funds to their clients. Therefore, coaches frequently had to refer clients to other programs in order to receive training funds. This made it difficult to recruit and retain clients.

- **Collaboration with the workforce system.** Some coaches reported challenges in collaborating with partners from the workforce system due to weak relationships with the workforce system or their limited prior experience in the system. When coaches did not or could not collaborate with workforce partners, clients frequently received redundant services and/or faced service gaps. Because coaches could not provide training or supportive services funds, they needed to collaborate with organizations to provide clients with complete

services. Clients also expressed frustration that they did not have one point of contact from the workforce system for receiving services and support.

- **Target population.** Many coaches indicated that they struggled to serve the grant's target population, particularly trade-affected workers. Coaches from four community colleges reported that these clients tend to be harder to serve due to the nature of their barriers to employment, including, in some cases, low education and skill levels. Consequently, these coaches noted that their clients often did not finish their training programs. In addition, coaches from 16 community colleges noted that serving trade-affected workers has been particularly difficult due to challenges in identifying trade-affected clients to serve in the first place. In some cases, this is because the trade population in the service area is so small that it is difficult to find enough trade-affected people to recruit as clients. In other cases, coaches did not serve trade-affected workers due to a weak relationship with the VEC office; in these situations the VEC appeared to be unwilling to refer their trade-affected clients to coaches for additional services.

- **Service area.** Coaches from large, rural areas viewed their service area as a barrier to implementation, since it is challenging to reach clients in all portions of their area. Further, the large geographic area has hindered collaboration with other programs, such as VEC or WIA programs, as their staff might be located in other parts of the service region. Coaches found matching clients with jobs in these areas to be particularly challenging. According to coaches, the areas do not include many employers, and clients often face transportation challenges. Therefore, clients' employment options are limited to job opportunities located near their homes.

Conversely, coaches across community colleges cited the following factors related to partnerships and collaboration as being critical to the success of the coaching role:

- **Partnerships with community organizations.** Through their work with community organizations such as Goodwill Industries, coaches were able to more easily identify potential clients, especially older clients or displaced workers.

- **Partnerships within the community college.** By establishing connections within the community college, coaches could market their services to current students. Coaches worked with other departments within the community college and made presentations to community college classes, in particular, to student development (SDV) classes.

- **Past work experience.** Coaches from about a quarter of community colleges cited their past work experience as critical to their success in the coaching role. These individuals typically had worked in the AJC or another partner organization prior to being hired as a career coach. Due to their past work experience, they had established relationships with staff from partner workforce organizations, which facilitated collaboration on behalf of their clients. Consequently, these coaches were able to focus more of their time on serving clients rather than on building relationships with workforce partner staff. Further, these coaches also had relationships with area employers, which allowed them to more easily identify potential employment opportunities for their clients.

Figure B.1. Strategy 1 (ACCs/ELJPCs) logic model

Inputs	Activities	Outputs	Outcomes
Strategy-specific inputs Number of adult career coaches (ACCs) Number of experiential learning/job placement coordinators (ELJPCs) **Other inputs** Wizard One-Stop/American Job Center policy and practices VEC policy and practices	**ACC responsibilities** Career coaching Written career plans Resume assistance Coordinating with experiential learning/job placement coordinators Coordinating with workforce and education partners and programs **ELJPC responsibilities** Identifying employers and programs Workshops Attend and host career fairs Guest speaker events Job shadowing opportunities Coordinating with ACC	**Clients/students** Connected to education and training • Increased enrollment in education • Higher passing rates for coursework Connected to supportive services Placed in experiential learning opportunities **Employers** Stronger connections with community college and workforce system Participate in events and programs sponsored by the community college system	**Increase educational success** Increase receipt of Career Studies Certificate (CSC) Increase receipt of degrees and certificates Increase receipt of state licensure or industry certification **Increase employment success** Increase employment rates Increase earnings

Context

Potential client population	Local economy	Other factors
• Demographics of the area • Number of veterans, trade-affected and other displaced or low-skilled workers	• Unemployment rate • Industrial composition • Connections between workforce system and employers	• Institutional support from the college • Physical location of counselors • ACCs' and ELJPCs' past work experience

WIZARD: STRATEGY PROFILE

The study team gathered information about implementation of this strategy through a review of background documents, telephone interviews with the consortium strategy lead, telephone interviews with adult career coaches (ACCs) and experiential learning/job placement coordinators (ELJPCs) from each of Virginia's 23 community colleges, and in-person interviews conducted during site visits to five colleges. In-person interviews at the site visit colleges included a range of respondents, including the college grant managers and strategy leads, coaches from these colleges, workforce development staff, and a focus group with E-HLTH students. Findings in this profile represent the views of these respondents included in our data collection efforts and are not necessarily representative of all Trade Adjustment Assistance Community College and Career Training (TAACCCT) grant stakeholders.

A. Overview and Goals

Through the grant, the Virginia Community College System (VCCS) funded the addition of course and career planning modules to the Wizard, an online platform that provides Virginians with information regarding the state's higher education options, including financial aid and course offerings. The grant-funded enhancements, introduced in 2013, allow current and prospective college students to explore their interests, skills, available occupations, and academic opportunities. Users can then create a step-by-step plan for earning a certificate or degree aligned with their desired occupation. The course and career planners are also intended to facilitate students' work with their counselor and/or coaches. Using the Wizard, students can develop and share their plans—developed using the Wizard—with community college faculty and staff. Ultimately, these tools are intended to help students identify and track their academic and career goals, resulting in increased retention and increased educational and employment success.

B. Target population

Any Virginians with internet access can use the Wizard tools by registering for the site and creating a user profile. Whereas the early Wizard modules were mainly relevant to current and prospective students, the introduction of career-focused tools, used by coaches with their clients, expanded Wizard use to a broader audience comprising workforce clients, including Trade Adjustment Assistance (TAA) eligible and displaced workers.

C. Staff involved with strategy implementation

As a statewide technology platform, the Wizard's implementation and management occurs at the VCCS rather than the college level. Within the VCCS, the director of student support technologies oversees the implementation of platform components, including the grant-funded additions, and manages the Wizard's ongoing use. Since implementing the grant-funded modules, the director of student support technologies further supported implementation of these modules by making presentations, hosting trainings, developing materials to facilitate usage, and providing ongoing support to users, including students, faculty, and staff.

At the college level, student development (SDV) course instructors and coaches most frequently use the Wizard in serving their students and clients. SDV instructors use the Wizard to support the college and career planning components of the course. As previously noted, coaches

are required to use the Wizard with each of their clients to assist with career planning, though coaches typically reported that the Wizard was not an integral component of service delivery, as they have other tools available to help their clients explore potential career options.

All college staff, from counselors to presidents, also receive training on using the Wizard platform and understanding its features.

D. Strategy implementation across colleges

The Wizard is one of many tools used by coaches to help their clients uncover their academic and career interests. Approximately 90 percent of career coaches interviewed indicated that they were required to use the Wizard when initially meeting with and enrolling a client in coaching services. Typically, coaches used the Wizard in conjunction with other career planning tools and aptitude assessments commonly used by workforce agencies, such as CareerScope and Choices. Coaches also used other tools to provide clients with labor market information, such as the Bureau of Labor Statistics' O*NET. Because of the overlap with existing tools, most coaches felt that the Wizard was not an integral part of serving their clients. They felt other tools provided better information for veterans (as well as eligible spouses), trade-affected and displaced workers who are looking to make career changes rather than to start their careers.[5] Across the four American Job Centers (AJCs) visited during site visits, only one case manager reported using the Wizard as a career planning tool. The others did not use the Wizard and did not have plans to integrate its use into serving clients.

According to the VCCS Wizard lead and other stakeholders at community colleges, the Wizard is an integral component of SDV courses in preparation for working with support service staff on college and career planning in the future. Some colleges require all entering students to take SDV courses. When used within the context of SDV, the Wizard helps strengthen connections between the classroom and support services offered by the college, as students no longer need to initiate a conversation about career planning with an adviser or other support service staff. Instead, students can begin to craft a college and career plan guided by their SDV instructor via the Wizard and then have much more productive and substantive meetings with advisers, coaches, and others down the road. In this way, the Wizard provides the college with a common set of college and career planning steps that unifies the guidance that students receive both inside and outside the classroom.

E. Implementation successes and challenges

Coaches and the displaced workers included in a focus group viewed the Wizard as most useful for planning coursework in the community colleges and exploring career paths for younger, traditional students, though they were less confident about its usefulness with other client populations. According to these respondents, the content of the Wizard is oriented toward those looking to start their careers, and many of the potential careers presented in the Wizard results are not realistic options for older clients. Further, they reported that the Wizard suggests occupations that often require longer education and training programs, whereas veterans, trade-affected and displaced workers would prefer shorter-term training options to enable them to

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[5] Moving forward, the term "veterans" refers to both veterans and eligible spouses.

quickly reenter employment. Consequently, displaced workers were less likely to view the Wizard as useful when developing their career plans, although they did find the local labor market information and the platform's capacity to accurately capture their strengths and weaknesses related to their career prospects to be helpful.

F.   Respondent recommendations

Displaced workers included in a focus group and coaches suggested some changes could improve the Wizard experience for current and future users. Displaced workers perceived the salary information to be inaccurate, based on their understanding of local salaries. Additionally, they wanted access to labor market information for areas beyond their local community so that they could consider job opportunities in other areas. Although the platform provides labor market information for the entire state, coaches suggested that issues navigating the site and its features may have prevented some users from accessing this information.

Figure B.2. Strategy 2 (Wizard) logic model

Inputs	Activities	Outputs	Outcomes
Technological skills of client population	**Career planning**	**Students**	Reduce the need for face-to-face interaction with advisors
Strategy-specific inputs	• Assessments (skills, interests, and values)	Gain a better understanding of skills, interests and career pathways	**Increase educational success**
Awareness of WIZARD availability	• Labor market information	Consider educational options	Decreased personal cost of education
Student and faculty perception of WIZARD reliability	• Resume builder	• Develop course plan	Reduce time for degree completion
	College planner	• Develop transfer plan	
Student prior use of the WIZARD	• College information	• Understand financial aid options	Increase degree completion
	• Information on degree requirements		Increase transfers to four-year colleges
Faculty/staff understanding of the WIZARD	• Course planners	Prepare for labor market	
	Financial aid planning		**Increase employment success**
Web-based training for faculty and staff	• College cost calculator	**Faculty**	Develop a better understanding of possible careers and educational requirements for chosen careers
Quality of WIZARD technology and user interface	• Financial aid Application tool	Review and provide feedback on career and course plans	
	• Financial literacy		
WIZARD interface with other data systems	• Community college award estimator		Increase skills such as resume preparation
	Transfer planner		
Integration of the WIZARD into college courses	College application tool		

Context

Potential client population	Other factors
• Available to the public at no cost	• Limited personnel resources at the system level
• Course planner use limited to current students	• Use by other workforce development agencies
	• Use by the Virginia middle and high schools

SAILS: STRATEGY PROFILE

The study team gathered information about implementation of this strategy through a review of background documents; telephone interviews with the consortium strategy lead; telephone interviews with adult career coaches (ACCs) and experiential learning/job placement coordinators (ELJPCs) from each of Virginia's 23 community colleges; and in-person interviews conducted during site visits to five colleges. In-person interviews at the site-visit colleges covered a range of respondents, including the college grant-managers and strategy leads, developmental education faculty, and coaches from these colleges, as well as a focus group with developmental education faculty. Findings in this profile represent the views of these respondents included in our data collection efforts and are not necessarily representative of all Trade Adjustment Assistance Community College and Career Training (TAACCCT) grant stakeholders.

A. Overview and goals

The Student Assistance and Intervention for Learning Success (SAILS) Early Alert System is a communication platform that provides faculty with a means of directly contacting students and support services staff regarding concerns and successes related to students' academic performance, attendance, or class participation. The platform is preset with specific flags and kudos (see Table B.1) for communicating student concerns and successes, respectively, with accompanying standardized email templates sent from the instructor to the student. SAILS also includes an attendance feature used by instructors to record and track attendance of each student, which they can also use to identify students who should be flagged for attendance concerns.

Table B.1. SAILS flags and kudos

Tracking type	Name	Description
Flag	Assignment concerns	Student receives low scores on assignments
	Attendance concerns	Student missed classes or tardiness
	General concern	Concern unrelated to another flag
	In Danger of Failing	Student in danger of failing and requires immediate intervention
	Low Participation	Low participation in class
	Low Quiz/Test Scores	Student receives low scores on quiz or test
	Never Attended	Student never attended the course section
Kudo	Keep up the Good Work	Encourage a student to keep working hard and producing positive results
	Outstanding Academic Performance	Congratulate a student on producing excellent work
	Showing Improvement	A student is showing improvement from previous performance or behavior
System flag	Three or More Active Flags	The system raises automatically if a student has three or more flags or five or more flags in order to identify students with the most issues in their classes.
	Five or More Active Flags	

The VCCS hopes that SAILS will increase retention and student success by communicating faculty-identified concerns to students and providing them with resources for support. To a lesser

extent, SAILS is meant to motivate students through communicating their successes and improvements in their coursework.

B.   Target population

The SAILS platform is primarily designed to target students at greater risk for dropping out or failing, such as first-generation college students and students needing remediation. For this reason, the VCCS first piloted SAILS in developmental education courses and then extended its implementation to gateway courses (student development (SDV) courses and introductory English, math, and biology courses) before beginning campus-wide implementation. Eventually, SAILS use will expand to include all courses across the Virginia Community College System (VCCS).

C.   Staff involved with strategy implementation

Site visit colleges generally had one or two SAILS leads (usually a dean or vice president) and a core SAILS implementation team consisting of counselors, support and IT staff, and faculty. The college SAILS leads trained faculty and staff at their colleges regarding the use of SAILS. They also served as liaisons between the college and the VCCS regarding SAILS implementation.

All instructors of courses implementing SAILS and relevant student support staff are involved in the process of raising and clearing flags. Typically, instructors initiate communications by raising a flag on a student with academic concerns or by conferring a kudo to a student demonstrating success or improvement. Student support staff, such as advisors, retention specialists, and success coaches, respond to flags by contacting students and providing them with information about supports at their college.

D.   Strategy implementation across colleges

Colleges have followed different timelines in rolling out the SAILS platform to all courses. All colleges piloted the platform in fall 2013 in developmental education courses, followed by a uniform rollout to gateway courses in fall 2014. Following this start-up period, colleges were given latitude to expand system usage to additional courses, if desired. To date, 13 colleges have rolled out SAILS to all courses.

Although SAILS' features do not differ across colleges, the VCCS granted colleges flexibility to emphasize different features to meet student needs. Though the primary function of SAILS is to identify and support students with various academic concerns using flags, some colleges have utilized the kudos and attendance features more than others. At several colleges visited, the number of kudos that faculty confer exceeds the number of flags raised. One SAILS lead explained that they had intentionally emphasized this feature during trainings as a way to provide positive motivation to students. Faculty members who participated in a focus group at one college also reported receiving positive responses from students given kudos, causing the practices to spread throughout the campus. The SAILS lead at another college reported that faculty found the attendance tool very helpful.

Colleges also have different interpretations about the purpose of raising and clearing flags, and as a result, have developed different processes for doing so. For example, colleges vary in terms of who first responds to a raised flag. Two variations in responses include:

- Faculty are asked to make contact with the student regarding the issue before raising a flag, and then once the flag is raised, the support staff attempt contact with the student.

- Faculty raise a flag for any relevant issue and then are asked to document their attempts to reach the student in SAILS and clear the flag if they are able. The support staff will reach out to the student only after seeing documentation that the faculty member has made attempts without success.

Colleges also vary in terms of when and how often flags are cleared. At one college, assigned support staff clear the flag once they have had the chance to speak with the student, or after a few days of unsuccessfully trying to reach the student (10 days is the longest a flag will go uncleared). Therefore, a cleared flag does not necessarily mean that the issue has been resolved; it simply means that it has been addressed. At another college, staff are hesitant to clear flags because they assume that a cleared flag means that the problem is resolved. Therefore, most flags at this college remain active through the end of the semester. These two approaches for clearing flags lead to different college rates for raising flags and subsequent responses to those flags. At a college where flags are cleared more frequently, a new flag will be raised again each time the concern comes up and the support staff and/or instructor will make subsequent contacts with the student.

As shown in Table B.2, SAILS usage in fall 2014 varied widely across campuses, which can be attributed to the differences in approaches to implementation described above and also differences in the timeline for expansion. In fall 2014, some colleges were implementing SAILS in all courses, whereas others were only implementing in gateway courses (developmental education, SDV, and introductory math, English, and biology). As a ratio to the total number of students, flag use ranged from .46 to .89 in colleges that had a full roll out and from .10 to .79 in colleges implementing in only gateway courses. Kudos use ranged from .45 to 1.28 in colleges that had a full roll out and from .07 to .47 in colleges implementing in gateway courses. For most colleges, the number of flags exceeds the number of kudos, but in select colleges, the number of kudos far exceeds the number of flags (e.g., Eastern Shore, Paul D. Camp, Piedmont Virginia, and Virginia Western). Overall, the top users of SAILS were colleges implementing the system in all courses (Piedmont Virginia, J. Sargeant Reynolds, Southside Virginia, New River, and Eastern Shore). Mountain Empire stands out as having high usage for a college that was not fully implementing SAILS by fall 2014.

Table B.2. SAILS usage across colleges, fall 2014

College	Total flags	Ratio of flags to total students	Total kudos	Ratio of kudos to students	Total tracking items	Ratio of tracking items to students
Colleges implementing in all courses in fall 2014						
Blue Ridge	2,511	0.57	1,991	0.45	4,502	1.01
Danville	2,929	0.68	2,402	0.56	5,331	1.25
Eastern Shore	385	0.45	802	0.94	1,187	1.39
J. Sargeant Reynolds	11,060	0.89	9,164	0.74	20,224	1.62
Lord Fairfax	4,549	0.63	4,337	0.60	8,886	1.23
New River	3,805	0.79	2,966	0.62	6,771	1.41
Piedmont Virginia	4,272	0.76	7,180	1.28	11,452	2.03
Southside Virginia	2,926	0.51	4,231	0.73	7,157	1.24
Southwest Virginia	1,900	0.72	1,994	0.76	3,894	1.48
Virginia Highlands	1,779	0.72	1,488	0.60	3,267	1.32
Virginia Western	3,956	0.46	5,397	0.62	9,353	1.08
Wytheville	2,331	0.67	1,595	0.46	3,926	1.13
Colleges implementing in gateway courses in fall 2014						
Central Virginia	777	0.16	806	0.17	1,583	0.33
Dabney S. Lancaster	368	0.28	164	0.13	532	0.41
Germanna	2,191	0.30	1,637	0.22	3,828	0.52
John Tyler	1,057	0.10	812	0.08	1,869	0.18
Mountain Empire	2,298	0.79	1,063	0.36	3,361	1.15
Northern Virginia	7,642	0.15	3,844	0.07	11,486	0.22
Paul D. Camp	339	0.24	650	0.47	989	0.71
Patrick Henry	605	0.19	421	0.13	1,026	0.32
Rappahannock	917	0.26	853	0.24	1,770	0.50
Tidewater	6,620	0.23	5,353	0.18	11,973	0.41
Thomas Nelson	3,466	0.31	2,116	0.19	5,582	0.51
All colleges	68,683	0.36	61,266	0.32	129,949	0.69

Note: The total number of students used to compute the ratios is based on fall 2013 enrollment.

As shown in Table B.3, faculty and staff across all colleges most frequently raised flags for assignment concerns (28 percent), in danger of failing (24 percent), and attendance concerns (16 percent). All other flags were each raised in 10 percent or less of the cases.

Table B.3. Usage of different flag types across all colleges

Flag type	Description	Total Flags	Percentage of All Flags
Assignment concerns	Student receives low scores on assignments	19,311	28.10%
In danger of failing	Student in danger of failing and requires immediate intervention	16,599	24.15%
Attendance concerns	Student missed classes or was tardy	10,881	15.83%
Low quiz/test scores	Student receives low scores on quiz or test	6,631	9.65%
Never attended	Student never attended the course section	6,264	9.11%
General concern	Concern unrelated to another flag	5,173	7.53%
Low participation	Low participation in class	3,874	5.64%

E. Implementation successes and challenges

Faculty and SAILS leads at colleges identified common key features facilitating SAILS usage. These respondents noted the usefulness of both the VCCS support and the in-person trainings held by colleges for faculty on campus. When comparing SAILS to the college's previous alert process, one SAILS lead explained that SAILS is much easier to use because all faculty and staff have to do is "just click, click, send." VCCS provided supports included weekly meetings and webinars to deliver updates on SAILS, training materials, and technical assistance. Across sites visited, college SAILS leads reported that the responsiveness of the VCCS to questions and concerns and sharing resources has been a primary factor for supporting implementation. College SAILS leads do not have to "reinvent the wheel" for their trainings, because the VCCS provides them with presentations and other templates. The weekly meetings have also facilitated sharing of ideas and resources across colleges.

College-level SAILS trainings have focused on the purpose and importance of SAILS and provided step-by-step instructions for implementation. Colleges typically provided separate trainings to support staff and faculty, tailoring the instructions for using SAILS to the participants' role in the process. Some colleges offered multiple trainings to faculty in different locations and at different times so that all faculty would have the opportunity to attend, including adjuncts who work fulltime off campus. In addition to formal trainings, SAILS leads typically offered one-on-one assistance to address faculty members' questions about using SAILS or to adjuncts who were unable to attend trainings. Overall, SAILS leads from select colleges reported that the trainings and technical assistance have helped faculty members become comfortable with and appreciative of the platform, supporting their use of flags and kudos.

SAILS leads and faculty from colleges visited also emphasized the importance of having a high level college administrator, such as a dean, vice president, or president, who acted as a champion for SAILS. At one college visited that is a high user of SAILS, the president immediately embraced the idea of SAILS and appointed a vice president as the SAILS lead. Faculty reported that having such strong, initial enthusiasm from top administrators helped SAILS become part of the college's culture. In a college with relatively low usage, the SAILS lead explained that getting the deans' support had been a barrier to implementation.

In most cases, faculty from sites visited agreed that SAILS is working well and being implemented as intended. The system is easy to use, and faculty generally understand how to use it after receiving training. SAILS leads in the colleges we visited reported that they offer assistance to faculty having trouble using the platform but have not received many questions related to its basic functions. Most questions have been related to the process and timeline for completing progress surveys. Faculty of sites visited also reported that students have been responsive to receiving notifications of a flag or kudos. One faculty explained that the SAILS emails look more official than a typical email from an instructor, communicating that it is an important matter. Other faculty shared that students really appreciated receiving kudos, which has encouraged more faculty to use the feature. Although colleges do not yet have data to show changes resulting from SAILS use, SAILS leads and faculty observed that since using SAILS, communications have increased between faculty, students, and support services staff and more students are requesting academic assistance.

Moving forward, the primary barrier for SAILS usage at colleges will be the need for a sufficient number of support staff to respond to flags. At the time of the site visits, colleges implementing SAILS only in gateway courses already felt that their support staff were being stretched thing and did not know how they would be able to handle the high volume of flags once they expanded SAILS to all courses. One SAILS lead explained that "Having enough people to respond to flags has been the biggest challenge. [Support staff] want to have ongoing meaningful contact with students, but it is hard to do that when they have to clear all of the flags." Another SAILS lead from a college with a large student population explained that only first-year students are assigned to advisors and receive responses from a support staff person when a flag is raised. Other students will only receive an email from the instructor and will not receive follow-up communications from support staff.

Providing training to all faculty, including adjuncts and faculty across multiple campuses also has served as a barrier to implementation. SAILS leads explained that it is difficult to train adjuncts because they often have full-time jobs off campus and cannot all come to the college at the same time. One SAILS lead responded by holding an adjunct training session at a time more convenient for them and by providing video recordings of the training sessions and booklets to adjuncts who could not be there. One college struggled with providing trainings to all faculty because the SAILS lead needed to conduct trainings across all campuses.

Finally, faculty from some colleges reported lack of clarity on certain SAILS processes, in particular the process for clearing flags. For example, in some colleges clearing a flag means that the student has been contacted, but not necessarily that the problem has been resolved. A SAILS lead explained that this idea was not intuitive, and many flags were left uncleared because faculty still had concerns about the student. In a focus group of faculty, some reported clearing their own flags and others said they thought they were not supposed to clear flags because it was the responsibility of support staff.

F. Respondent recommendations

SAILS leads across several colleges expressed the desire to have more SAILS features that could be customized by college and/or campus. Ideas for college-level customization include the following:

- SAILS automatically produces reports of interest to most community colleges, including those based on different student groups, such as athletes or students funded through grants (for example, TRIO, which is designed to serve students from disadvantaged backgrounds, including first-generation college students and/or those with disabilities). A lead from one college suggested that each college should be able to create at least one student group that is not on the default list of groups in order to more effectively track a group of students that is meaningful to that individual campus, such as a college-specific scholarship program.

- One SAILS lead wished that colleges could choose to not include certain flags. This college has opted not to use the general concerns flag because the SAILS team feels that the other flags should cover any relevant concern and the general concerns flag is not descriptive enough for support staff to follow up with students. Even though the SAILS team has asked faculty not to use the general concerns flag, they cannot remove it from the system; some faculty are confused about why it is an option and still use it.

- A SAILS lead from a college with multiple campuses expressed the need to customize the emails that students receive based on their campus. The lead explained that each campus has different support staff and processes for providing support; the email that students receive is generic and does not provide the specific information that students need to receive support on their campus.

A SAILS lead from one college also recommended integrating the financial aid office into the implementation of SAILS. The lead indicated that the financial aid office receives SAILS alerts but does not yet respond to them. SAILS alerts could be used to warn students and the financial aid office when academic progress might threaten a student's ability to receive financial aid.

Figure B.3. Strategy 3 (SAILS) logic model

Inputs →	Activities →	Outputs →	Outcomes
Strategy-specific resources Technology and integration with existing data systems Community college SAILS lead and implementation team Community college administrator support of the system Faculty and student awareness and understanding of the system Communication regarding the system and its purpose On campus and web-based trainings	**Faculty** Raise flags to indicate academic concern or give kudos to signal positive feedback Receive notification of flags **Students** Receive notification of flags Obtain feedback on their course performance	**Faculty** Increase Student Success Center awareness of students who are struggling • Assist students with needs • Clear flags in the system Advisors able to better target resources **Students** Receive needed support	**Increase educational success** Increase course completion rate Increase degree completion

Context

Potential client population	Other factors
• All students enrolled in community colleges with an emphasis on students most at risk for failing or dropping out • Faculty at early implementing community colleges	• Extent of college's adoption of SAILS (all courses or more limited number of courses) • Availability of support service in college • Student/advisor ratio • Size of college and number of campuses

FACULTY PROFESSIONAL DEVELOPMENT COMPONENT OF DEVELOPMENTAL EDUCATION: STRATEGY PROFILE

The study team gathered information about implementation of this strategy through a review of background documents, telephone interviews with the consortium strategy lead, and in-person interviews conducted during site visits to five colleges. The in-person interviews covered a range of respondents including the college grant managers, strategy leads, and developmental education faculty from these colleges; in addition, the team conducted a focus group with developmental education faculty. Findings in this profile represent the views of these respondents included in our data collection efforts and are not necessarily representative of all Trade Adjustment Assistance Community College and Career Training (TAACCCT) grant stakeholders.

A. Overview and goals

Professional development (PD) for developmental education courses in math and English is intended to support faculty as they transition to the redesigned developmental education curriculum. The developmental education PD has included several types of events, including symposiums, convenings of subject matter experts, a developmental education institute, and other ad hoc convenings open to different groups of faculty. Through faculty embracing and using new practices, students receive needed supports and gain improved math and English skills in order to increase educational success. Ultimately, the PD should impact student outcomes, including increased completion of developmental education courses, reduced time to transition to college courses, and increased graduations and transfers to four-year colleges.

B. Target population

Faculty teaching developmental mathematics and English courses receive the PD; students in their courses receive the benefits of the improved instruction and curriculum.

C. Staff involved with strategy implementation

The early PD events targeted developmental education faculty in English and mathematics, with different events targeting select groups of faculty:

- Symposium: open to all faculty at all colleges

- Convenings of subject matter experts: one representative from each college

- Institute: 50 participants selected each year through an application process

- Ad hoc convenings: select participants depending on the topic

At the site visit colleges, department leads reported attending more state-level developmental education PD events than did other staff; they shared with colleagues what they had learned during the events. Adjuncts typically attended the fewest events due to constraints of having another job and less flexibility with travel.

During recent years, the PD has expanded to include student development (SDV) course instructors and support services staff who often work with the same students to achieve the goals of increasing retention, graduation, and transfers to four-year colleges.

D. Strategy implementation across colleges

Although department leads across colleges attended and participated in PD events, the Virginia Community College System (VCCS) played a large role in guiding PD content, and supported structures for delivering PD at the college level. As described below, the VCCS determined the content of PD sessions throughout the grant period. Through the developmental education redesign, the VCCS also hoped to facilitate the formation of communities of practices across colleges.

1.   Professional development topics

Over the course of the developmental education redesign rollout, the content of the developmental education PD sessions shifted from a focus on curriculum changes to a focus on integration of other courses and strategies into the developmental education curriculum. According to developmental education faculty interviewed during site visits, math sessions initially focused on the details and logistics for implementing the new computer-based curriculum. These sessions addressed scheduling, timelines, and policies, as well as the importance of data analysis for reviewing students' progress in the course and responding to concerns. English sessions focused on instructional design, integration of reading and writing instruction into each course, and higher-level thinking skills. Developmental education faculty reported that recent developmental education PD sessions have focused more on common instructional approaches and strategies across math and English developmental education and SDV courses, including using the Wizard, SAILS, and QUINN.

2.   Communities of practice

An initial goal of the developmental education PD was for colleges to form communities of practice (groups to facilitate idea sharing and collaboration). This occurred in several ways. First, as part of the redesign, reading and writing—previously taught as separate subjects—were integrated into all English classes. This brought together reading and writing instructors within English departments to learn from each other regarding how to teach both subjects. The developmental education PD also brought English instructors, math instructors, and student support services staff together at the same events and sessions. Instead of having each group (reading, writing, math, support services) receive separate trainings, they now participated in the same events to learn about how they each played a role in helping achieve the same goals.

According to the developmental education strategy lead, colleges often formed communities of practice through projects completed by each college over the course of a school year to address a particular challenge at their college associated with integrating developmental education and support services. The projects also served as a way to expand developmental education PD beyond the select group of attendees to the statewide events. For these projects, each college wrote a proposal describing the problem, outlining a plan to address the problem, and describing how success would be measured. For example, one college identified that most students who were enrolled in developmental math courses were also enrolled in developmental English, and that these students lacked a learning community and the technology skills needed

for success. To address the challenge, the college created a SEaM (SDV English and Math) Scholars Program in which a cohort of developmental education students register for a blocked schedule of the same courses. The cohort attends the same SDV English and math developmental education courses, thus forming a learning community. As part of this project, faculty identified common themes across courses, as well as logistics, such as scheduling, staffing, technology requirements, and needed funds. The faculty plan to assess outcomes by evaluating pass rates for each course and also by tracking students' retention, and graduation/transfers. Working on projects such as this throughout the year provided additional opportunities for college staff across different departments to build mutual understanding of one another's positions, share ideas, and problem solve.

E. Implementation successes and challenges

Several faculty who attended PD events said that the most valuable aspect of participation was the unscheduled time that allowed for informal networking and idea sharing across colleges. In this way, the select group of faculty who attended statewide events formed communities of practice with faculty outside of their college. Many still remain in contact with colleagues that they met at developmental education PD events. One developmental education math instructor explained that she regularly corresponds with colleagues at other colleges over email, which sometimes can spark lengthy conversations and lead to collaboration.

Faculty of the colleges we visited also reported that adjunct faculty have more difficulty participating in communities of practice with faculty both within and outside their college. Adjunct faculty were less likely to attend statewide events, due to the constraints of having another job and, therefore, could not participate in the idea sharing that occurred at them. Faculty explained that communities of practice within the college usually develop through informal interactions that take place spontaneously throughout the day rather than at scheduled meetings. This can also limit the opportunities of adjunct staff who are not at the college on a day-to-day basis. Because adjuncts make up a very large percentage of the faculty at VCCS colleges, the need to include them in the PD approach may continue to be a challenge.

F. Respondent recommendations

Faculty of sites visited recommended that future developmental education PD should:

- Provide more regional trainings to increase access to adjuncts and other staff with limited ability to travel

- Include more unscheduled time for informal interactions

- Provide focused training sessions to subgroups of colleges that have similar characteristics or issues

In general, faculty we interviewed appreciate the PD, believe that it is improving their practice, but would like to see more faculty included in it. Faculty interviewed in the focus group suggested that VCCS could offer more regional PD events, instead of holding most in Richmond. Faculty interviewed during site visits would also like for VCCS to build off of its success in creating communities of practice by building in even more unscheduled time for informal networking and idea sharing during PD. Some faculty expressed the desire for PD events to

divide up colleges into groups based on similar characteristics, such as student population, implementation stage, or common implementation issues. Faculty suggested that the PD sessions could then focus on the particular needs of the smaller group of colleges and also provide time for more targeted networking between faculty members from different colleges who are working to find solutions to similar challenges.

Figure B.4. Strategy 4 (Developmental education faculty professional development) logic model

Inputs	Activities	Outputs	Outcomes
Student characteristics Demographics Need for support English and math preparation at entrance **Faculty characteristics** Past training and preparation Teaching skills and experience Receptivity to new approaches Availability to take time off and to travel **College characteristics** Presence of professional learning communities Support from lead developmental education instructors	**Components of professional development** Exposure to national experts in developmental education College-level sharing of best practices and challenges Communities of practice Innovation of new practices Release time for redesign work **Venues** Symposium (one day, open to all)* Convenings of subject matter experts (one representative from each college)* Institute (50 participants, application process)* Ad hoc convenings	**Faculty** Buy in to developmental education • Understand redesign • Embrace redesign • Use redesigned curriculum • Adopt best practices in developmental education **Students** Increased access to support Change culture and behavior (to facilitate exiting from developmental education)	**Increase educational success** Reduce need for remediation Reduce time to transition to college courses Increase graduations Increase transfers **Increase employment success** Increase earned credentials

Context

Potential target population

• Activities limited to a subset of faculty members
• Focused on English and mathematics faculty members, but also includes student support services staff
• Effectiveness of assessment tool (for student placement in developmental education)

Other factors

• Changing policy environment around remediation
• High school curricula

*TAACCCT funded

E-HLTH: STRATEGY PROFILE

The study team gathered information about implementation of this strategy through a review of background documents including E-HLTH enrollment data provided by the Virginia Community College System (VCCS), phone interviews with the consortium strategy lead, phone interviews with adult career coaches (ACCs) and experiential learning/job placement coordinators (ELJPCs) from each of Virginia's 23 community colleges, and in-person interviews conducted during site visits to five colleges. The in-person interviews covered a range of respondents including the college grant managers and strategy leads, coaches from these colleges, workforce development staff, and employers, as well as focus groups with E-HLTH students and displaced students. Findings in this profile represent the views of these respondents included in our data collection efforts and are not necessarily representative of all Trade Adjustment Assistance Community College and Career Training (TAACCCT) grant stakeholders.

A. Overview and goals

Through the E-HLTH strategy, consortium leadership intended to develop a statewide E-HLTH training and certificate program that would be implemented across all of its 23 community colleges. Consortium leadership had two overarching goals for the strategy: to create a pipeline that would help veterans (as well as eligible spouses), trade-affected and other displaced or low-skilled workers transition to careers in the growing health care industry and to support and fill growing labor needs among the state's health-related employers.[6] Courses for these programs would be taught through online or hybrid models, comprising both classroom and online learning. Although consortium leadership originally envisioned E-HLTH as statewide program, ultimately only a subset of the state's community colleges implemented the strategy at the college level.

B. Target population

Though E-HLTH was originally targeted towards veterans, trade-affected and displaced workers needing to make a career transition, this population tended to be uninterested in the associated programs, according to coaches. Consequently, colleges focused on recruiting students for and maintaining enrollment in these classes more generally, by widening the target population to include any current or potential community college student interested in the health care industry. E-HLTH leads from some site visit colleges reported that people already employed in the health care industry also have been interested in the programs to enhance their existing skill sets.

C. Staff Involved in strategy implementation

Because decisions regarding the implementation of E-HLTH were ultimately made on a college-by-college basis, different types of staff were involved in E-HLTH implementation at each college. As described in the next sections, site visit colleges reported pursuing different approaches for implementing the strategy, which influenced the type of college staff members involved in implementation. College leaders, such as presidents or deans, were first responsible

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[6] Moving forward, the term "veterans" refers to both veterans and eligible spouses.

for deciding if their college would offer training or certificate programs as part of the E-HLTH strategy. If colleges opted to pursue the E-HLTH strategy, faculty in related fields led course development at all site visit colleges. Two of the colleges we visited also engaged local employers in the E-HLTH course development process, with the goal of aligning E-HLTH curricula with employer needs.

D. College-level strategy implementation

Although consortium leadership envisioned E-HLTH as a statewide strategy, it encountered barriers in selecting a single program that would meet the needs of all colleges. As described by the consortium strategy lead, consortium leadership originally developed plans for three possible E-HLTH Career Studies Certificate (CSC) programs (Health IT, Electronic Health Records (EHR) System Consulting, and EHR System Engineering) and surveyed all of the state's community colleges to solicit input on these proposed programs and each college's broader E-HLTH curriculum needs. According to the consortium strategy lead, no consensus emerged, leading consortium leadership to abandon its original objective of implementing a statewide E-HLTH program.

In June 2013, consortium leadership notified colleges that they needed to design or modify an E-HLTH program to satisfy the consortium's obligations under the DOL-funded TAACCCT grant. The consortium gave colleges the option to implement one of six programs of study to satisfy their E-HLTH obligations: the three CSC programs endorsed by consortium leadership, as well as three additional non-CSC programs. Alternatively, colleges could request approval to redesign an existing program as E-HLTH. To receive approval, colleges were to complete a form providing information regarding the courses included in the curriculum and the applicable certification, and submit it for approval by consortium leadership.

Colleges implemented E-HLTH differently based upon their existing curricula, student populations, and perceived local employer needs. Some colleges opted against implementing the E-HLTH strategy altogether, despite guidance from consortium leadership that they were required to do so. Few E-HLTH leads and grant managers with whom we spoke viewed the grant as an opportunity to develop new programs; they reported that their colleges instituted E-HLTH programs to comply with grant objectives. Once colleges received guidance from consortium leadership to implement E-HLTH at the college level, rather than the state level as originally intended, individual colleges selected programs that could be quickly implemented, given start-up delays. Consequently, grant managers at four site visit colleges reported working with college-level E-HLTH leads, who were typically faculty members, to redesign existing programs to meet their E-HLTH obligations. The remaining site visit college developed a new E-HLTH program in response to the grant, modeled after one recommended by consortium leadership.

E. Implementation challenges and successes

Given the change in approach for the E-HLTH strategy, E-HLTH and grant leads from site visit colleges commonly described the time and costs associated with developing new E-HLTH programs as barriers to doing so at their schools. New college programs are required to go through departmental and college-level approval processes; many colleges did not feel they had time to secure such approvals for a new program on a short timeline. Additionally, new programs

must undergo an external accreditation process, which is also long and costly, leading some colleges to believe that new programs are difficult to implement through grant funding.

Further, during site visits, college leaders, coaches, and E-HLTH students indicated that E-HLTH programs may not be suitable for trade-affected workers in Virginia. During phone interviews with coaches from all community colleges, we asked if trade-affected workers were interested in E-HLTH programs, and if not, why they might not be interested. Coaches offered the following reasons for lack of interest among this population:

- **Technological barriers.** According to coaches, trade-affected workers tend to have lower education levels and also lacked basic computer skills typically required in E-HLTH courses offering online instruction. Further, coaches from a rural community college noted that internet access in their area is not reliable, which presents challenges for enrolling in E-HLTH courses.

- **Program length.** Coaches across all colleges believed that trade-affected workers were more interested in shorter-term training programs. E-HLTH programs are CSC programs and, therefore, tend to be longer than noncredit training options. As a result, coaches felt these programs were not an appealing or suitable option for trade-affected workers who want to quickly return to employment.

- **Hesitancy to change fields.** According to coaches, trade-affected workers also expressed concern regarding working in health care fields. Coaches believed that trade-affected workers were accustomed to being employed in traditionally blue collar fields, such as manufacturing. Entering a health care profession would be a large cultural change for these individuals; coaches expressed reservations about their clients' ability or willingness to make this career change.

Finally, some coaches, grant managers, and E-HLTH leads reported not developing E-HLTH CSC programs or promoting these programs to students and other clients because they were not confident that the programs would lead to long-term employment. First, according to coaches, the local Workforce Investment Board (WIB) at seven colleges did not deem health-related occupations to be in demand; coaches from these colleges reported that college leaders did not believe it was appropriate to develop training programs or courses that were not aligned with the area's industry mix. Second, coaches and college grant managers interviewed at site visit colleges were uncertain that E-HLTH programs would adequately prepare students for employment in health fields; they believed that the courses were more appropriate as continuing education for those already employed in the health care industry. Third, coaches from two colleges noted that local employers prefer to train existing employees rather than hire new workers trained via the community college. Coaches from four site visit colleges also reported that for E-HLTH programs to adequately prepare students for employment, they must also include internships, as employers are unwilling to hire students without related work experience. However, creating internships requires buy-in from employers, which staff from two site visit colleges perceived as challenging.

In addition to these barriers, our telephone interviews with coaches suggest that some coaches may not have promoted E-HLTH because they were unaware of available E-HLTH programs. Nine coaches across six colleges stated that their colleges did not have an E-HLTH

program—when administrative records indicate that the college actually did. Ultimately, 20 of the 38 coaches interviewed through phone interviews (13 of whom were from colleges that did not implement an E-HLTH program) reported not notifying their clients about E-HLTH opportunities at their own colleges or the online program offered by Northern Virginia, even though they were supposed to do so according to consortium leadership.

Despite these challenges in developing and promoting E-HLTH, the E-HLTH lead from one site visit college believed that the program succeeded by offering hybrid classes. Through enrolling in hybrid classes, their students who struggled to balance school with other commitments, such as employment or family obligations, could benefit from the flexibility provided by online instruction. One E-HLTH student who participated in the focus group at this college concurred that the hybrid structure influenced her decision to enroll in the E-HLTH-designated training program

Overall, grant managers and E-HLTH leads across site visit colleges reported that these E-HLTH programs would continue beyond the life of the grant. One college plans to further redesign its program to better meet employer needs. Other colleges plan to refer students interested in E-HLTH programs to programs offered by colleges with well-established E-HLTH programs to meet their needs.

Figure B.5. Strategy 5 (E-HLTH) logic model

Inputs	Activities	Outputs	Outcomes
Employer support for training options Existing health-related courses at each college Tuition for credit-based E-HLTH programs Faculty availability to teach E-HLTH courses Guidance from VCCS on state-level programs	Development of training and certificate programs in health-related fields • Select field of study • Create a credit or noncredit program • Determine whether to offer online, in-person, and hybrid programs Marketing of the E-HLTH programs	**Students** Colleges offer new E-HLTH programs Trade-affected workers and other students enroll in E-HLTH programs Students complete E-HLTH program **Employers** Colleges engage local health industry employers Local health industry employers recruit college students	**Increase education success** Increase completion of credit and noncredit E-HLTH courses Increase receipt of certificates **Improve employment outcomes** Increase employment rates Increase placements in health care industry Improve retention of current health care employees Increase career growth for current health care employees

Context

Potential client population

- Number of veterans, trade-affected and displaced workers
- Number of existing health care workers seeking additional training/credentials
- Student career interests
- Technological capabilities

Local economy

- Demand for health care workers
- Demand for certificates in the health care field
- Locally in-demand industries and occupations
- Alignment between certificates, training programs, and available jobs (for example, medical coding vs. health records consulting)

Other factors

- HIPAA restrictions on student placements for clinical rotations
- Student family/child care obligations
- Program pace and difficulty
- Available tuition subsidies

WORKFORCE ENTERPRISE SYSTEM (WES): STRATEGY PROFILE

The study team gathered information about implementation of this strategy through a review of background documents, phone interviews with the consortium strategy lead and steering committee members, and in-person interviews conducted during site visits to five colleges. The in-person interviews covered a range of respondents, including the college grant-managers, strategy lead, and workforce development staff. Findings in this profile represent the views of these respondents included in our data collection efforts and are not necessarily representative of all Trade Adjustment Assistance Community College and Career Training (TAACCCT) grant stakeholders.

A. Overview and goals

The Workforce Enterprise System (WES) is a newly developed, statewide, web-based enterprise system funded by the grant to streamline the registration and management processes for noncredit courses. The system is designed much like an online "shopping cart" experience, where users can browse the array of noncredit courses offered by colleges around the state on workforce or community services-related topics. Through this strategy, the Virginia Community College System (VCCS) will be able to disseminate course listings across its systems, improving its services to both displaced workers looking for training programs and employers looking to design training programs for their employees.

Prior to WES, there was no way for Virginia community colleges to market noncredit courses to a broad audience. Instead, they had to rely on conventional marketing methods (such as telephone and hard-copy applications) and existing relationships with local employers to draw in students for noncredit courses. In addition, the existing registration process for these noncredit courses was inefficient, requiring people to register in person or by phone rather than online. VCCS designed WES in order to address these challenges and meet two key goals:

1. Increase enrollment among current students and expanding markets via an online presence

2. Improve revenues through better management of these courses via a unified data system by eliminating the need for redundant data entry across systems and by making it possible to use these data in planning for future course offerings

B. Target population

The target population is primarily new students—those who live outside of an area accessible to a VCCS college or who are apt to "shop" online. WES will also benefit new and existing students by making the registration process more efficient.

C. Staff involved with strategy implementation

WES is currently led by a project director who oversees a state implementation and project management team under the vice chancellor for workforce development. The team includes project managers, functional and technical leads, and a project coordinator, as well as college technical leads and meets several times a week to review risks on an ongoing basis and to support timely identification of VCCS action items. In that capacity, they complete risk analysis to avoid both implementation delays and unexpected costs. The group also conducts monthly

reviews of project activities and submits their findings to the VCCS steering committee, led by the vice chancellor for workforce development and comprising representatives from the workforce development, fiscal services, and information technology divisions. The steering committee is ultimately responsible for making decisions regarding WES implementation.

The vice chancellors for workforce development and information technology also serve as project sponsors for WES. As such, they engage stakeholders within the VCCS and across colleges in the WES decision-making process and solicit buy-in among stakeholders to support WES implementation.

Colleges rely on core implementation teams (CIT), overseen by workforce development deans and vice presidents, to support WES implementation. The CITs manage ongoing and day-to-day implementation activities within each college. These teams include the college's technical lead, along with members of each college's workforce development division, information technology department, and business office.

D. Strategy implementation across colleges

Although the state purchased an "off the shelf" technology platform with the same features across VCCS, colleges are responsible for tailoring the platform to create a website specific to their own course offerings. Colleges decide how to classify courses for display on their website and are responsible for entering data and processing registrations and payments.

The rollout of WES is occurring in four stages and is expected to go live across all colleges in fall 2015. Before launching their sites, colleges must complete user acceptance testing. Through this testing, colleges solicit feedback from key stakeholders to ensure that the site is well integrated with other college technology platforms, such as the PeopleSoft Student Information System (SIS), and to identify any changes that should be made to the site to support its use among relevant stakeholders. To support the work of CITs at each college, the VCCS is providing face-to-face training, intended to help build each college's site and to ensure user acceptance at each college prior to launching operations. Colleges included in the first and second implementation waves received this training. Colleges in the third wave will receive training in May 2015 and colleges in the fourth wave will receive training in July 2015. Colleges included in the first implementation wave are scheduled to officially launch their WES sites in April 2015, following user acceptance testing.

Once live, colleges are likely to develop marketing strategies to reach new users, such as people in other parts of Virginia who may be interested in taking a specific course online or groups interested in hosting summer programs on a college campus. College-level marketing strategies will be guided by the VCCS-developed Project Communication Plan for WES. This plan specifies action items to be completed by college or VCCS staff to support the rollout of WES. It includes a timeline for each item and indicates what type of staff person or persons is responsible for completing each item. Additionally, it is anticipated that career coaches will also share information about noncredit courses with their clients through WES. Finally, the workforce development system may also use WES when working to develop customized training programs at the colleges.

E. Implementation challenges/successes

Customizing the WES platform to meet the needs of key stakeholders and to ensure proper integration with existing VCCS platforms, including the PeopleSoft SIS, produced some implementation delays. The VCCS implementation team identified necessary changes through comprehensive quality testing and risk analysis, which included user acceptance testing. Based upon these reviews, the team opted to redesign WES' integration with existing platforms to facilitate future use of WES at the college level. Although the redesign effort contributed to early delays in implementation, the VCCS' quality control procedures allowed the implementation team to identify and remedy potential issues with the platform during development rather than the rollout phase. The consortium strategy lead indicated that this approach prevented further implementation delays from emerging and ensured that issues that could reduce support for the system were resolved prior to full rollout.

Despite this delay, the project director and college vice presidents of workforce development remain positive regarding the WES platform. According to the consortium strategy lead, end users perceived the previous platform as "clunky and hard to use," so they are anxiously awaiting the arrival of WES. VCCS leadership anticipate that the system will "greatly enhance" each college's ability to manage noncredit courses by making it easier to update course descriptions, allowing for online registration, facilitating marketing of courses, and improving compliance with reporting requirements.

According to these stakeholders, facilitating factors for WES implementation include:

- **Communication from the VCCS.** According to grant managers at site visit colleges, the VCCS implementation team provided consistent and frequent communication regarding WES and, in particular, the timeline for its implementation. As described by the consortium strategy lead, the VCCS maintains a WES intranet website with resources, such as implementation schedules, contact information, webinar recordings, and a discussion board, to assist CITs with their implementation activities. Additionally, the VCCS holds monthly webinars with CITs to support each college's implementation activities.

- **Experiences of pilot at Lord Fairfax**. Lord Fairfax Community College piloted the software on which WES is based. As a result, their implementation experiences informed the VCCS' work on expanding WES to other colleges around the state. Further, staff from Lord Fairfax provided other college users with information regarding the software and its features. Lord Fairfax reported strong measures of success following the implementation of its site, helping to build excitement and support for the platform across the VCCS.

- **VCCS-level project management.** As described earlier, the VCCS established a team to support the ongoing management and implementation of WES. Beyond supporting VCCS activities, this team worked to build CITs tasked with managing WES implementation at each college. The VCCS implementation and project management team followed industry standards for project management best practices. They also worked closely with the WES contractor to facilitate technical and functional implementation of the platform.

- **Buy-in from stakeholders and project sponsors.** WES received support from high-level staff within the VCCS, which helped the platform gain support from college-level staff. Within the VCCS, the vice chancellors of workforce development and information

technology served as project sponsors. They successfully engaged high-level stakeholders, including college presidents, to ensure that the platform received support from college-level decision makers. To facilitate buy-in from stakeholders, such as workforce development and information technology divisions, the VCCS implementation team regularly presented the platform at division meetings. They also included representatives from these divisions in the WES steering committee so that they could be engaged in the WES decision-making process.

Figure B.6. Strategy 6 (WES) logic model

Inputs	Activities	Outputs	Outcomes
Technological skills of client population and internet access	**Community college staff**	**Community colleges**	**Community colleges**
Strategy-specific inputs	Classify courses for display on their website	Increase student enrollment in noncredit courses	Increase revenue through better management of courses
Community college technical lead	Process registrations and payments	More efficiently track registrations, enrollments, and budget for noncredit courses	Make informed decisions about future course planning
VCCS IT and workforce development staff who provide support of the system	Update and maintain website	**Students**	**Students**
User awareness of WES availability	Market system to local community	More easily register for noncredit courses	Gain personal and professional skills
User perception of WES reliability/ease of use	Analyze registration and enrollment data to inform decision making	Enroll in noncredit courses they may have not previously considered or been able to access	Transition to for-credit community college programs
Monthly web-based training for faculty and staff	**Students**		
Site visits to select colleges to offer additional implementation support	Browse noncredit course offerings online		
Marketing regarding the system and its purpose to potential users	Register and pay for courses online		
WES technology platform and interface with for-credit SIS			

Context

Potential client population
- Current community college students
- New users in tech-savvy communities

Other factors
- Limited personnel resources at smaller colleges to update and maintain system

QUESTION INFORMATION NAVIGATOR (QUINN): STRATEGY PROFILE

The study team gathered information about implementation of this strategy through a review of background documents, phone interviews with the consortium strategy lead and steering committee members, and in-person interviews with college grant managers and strategy leads conducted during site visits to five colleges. Findings in this profile represent the views of these respondents included in our data collection efforts and are not necessarily representative of all Trade Adjustment Assistance Community College and Career Training (TAACCCT) grant stakeholders.

A. Overview and goals

The Question Information Navigator (QUINN) is a statewide "decision support system" designed to link together various data systems to produce standardized dashboards and other customizable reports to inform decision making by faculty, administrators, and other community college staff. Although QUINN was initially funded by the Virginia Community College System (VCCS) office and one college, the grant allowed for the continuation of all implementation phases and the training of users through December 2015.

Prior to QUINN, the VCCS had several separate administrative data systems accessed by different groups of staff throughout the community college system. As a result, data were not reported or used in a consistent, meaningful way. QUINN is designed to address this problem and has three primary goals:

1. Create "a single voice of the truth" by asking colleges to report data in a consistent way using a single data system

2. Facilitate more timely distribution and analysis of data

3. Put data in the hands of decision makers at all levels—not just college provosts and vice presidents (VPs)—to inform decision making

To meet these goals, QUINN includes modules for finance, student, student finance, financial aid, and human resources. The finance module provides data on budget expenditures, actual expenditures, and revenues by account code at the college or administrative unit level. Through the student module, colleges obtain student-level data, including demographic characteristics, academic experience information, and college enrollment information. The student finance module is an added component of the student module and provides student-level data on tuition charges and payments. The financial aid module includes student-level data specifying both the types and amounts of financial aid disbursed to individual students; the data contained in it can be linked to data from the student and student finance modules. Finally, the human resources module includes data on faculty, staff, and administrators employed by the VCCS. Data elements contained in this module include demographic data and data on employee actions, such as job transfers.

B. Target population

The target users for QUINN are college decision makers at all levels of leadership, including provosts, VPs, department managers, and deans. However, the project director and some steering

committee members are uncertain that all decision makers will use the system to inform decision making as intended. Expanding use of data beyond college Institutional Research staff may require colleges to develop a deeper culture of data-driven decision making at all levels.

C. Staff involved with strategy implementation

The VCCS implemented QUINN under the leadership of the decision support system project director, who managed daily system activities and overall project management. In this capacity, the project director coordinated work with vendor staff, reported to the VCCS QUINN steering committee (described below), validated the model, created QUINN customizations for different colleges and user groups, and built capacity among information technology (IT) staff to support QUINN's ongoing use. The project director received support from two institutional research staff members to identify required customizations and reporting functions. These staff members also conducted training regarding QUINN's reports and dashboards for end users. A training and communications specialist, responsible for developing training curricula, further facilitated training by organizing training opportunities, hosting introductory trainings, and creating documentation for end users.

Implementation of QUINN also required support from the VCCS' IT department. The grant funded an IT project director who was responsible for coordinating work between VCCS information technology staff and the vendor's technical staff. The IT project director also oversaw the work of three VCCS IT staff members who worked with the vendor to complete the technical tasks necessary to implement and customize QUINN for the VCCS.

To support implementation of QUINN, the VCCS established a steering committee comprising representatives from the Academic and Student Affairs Committee, the Administrative Services Committee, the Tech Council, the Internal Audit Committee, and Institutional Research Committee. The steering committee worked to connect each of the colleges with updates regarding QUINN implementation. They also provided input related to data inclusion during the QUINN decision-making process. Members of the steering committee participated in work groups and early training efforts, as well as soliciting support from relevant stakeholders. The steering committee created four working groups corresponding with the finance, student, financial aid, and human resources modules. Individual colleges selected staff members to participate in the working groups. Colleges contributed to the VCCS' implementation of QUINN and therefore did not have or need individual college-level QUINN strategy leads.

D. Strategy implementation across colleges

To create QUINN, the VCCS purchased the Blackboard Analytics system data model and engaged Blackboard consulting services to validate and pull data together across four data systems: the VCCS Student Information System (SIS), finance system, and human resources system, as well as the National Student Clearinghouse. These data are integrated using Pyramid, a middleware platform that processes, organizes, and enhances the data across these systems to make them easily accessible to users across the VCCS. The modules are used to create customized reports or dashboards (called "mini studies"). Users have generated over 1,000 reports to date on a variety of topics, such as the number of terms it takes for students to move from developmental education to college-level courses, or the percentage of Hispanic students

receiving financial aid who are retained. Colleges can access pre-formatted dashboards on the state website or generate their own reports/dashboards to meet their individual needs. Future plans include integrating data from WIZARD, SAILS, and WES into the QUINN system. The VCCS hopes to use these platforms to understand critical points in students' educational pathways that might influence their ability to graduate. Each of these platforms contains some student-level information, but not enough to independently examine this issue. By linking the "behavioral" data in Wizard and SAILS to student-level measures in QUINN, such as academic success and persistence, the VCCS hopes to understand how students interact with college offerings and staff, and how these factors influence student success. Additionally, the VCCS is interested in understanding how credit and noncredit courses can provide students with opportunities to stack credentials toward higher-level degrees.

E.   Implementation challenges/successes

The implementation of QUINN has faced delays due to several factors. The consultant hired to customize some of the modules experienced turnover and was unable to devote the necessary time and resources to the project. Further, the VCCS IT staff fell behind at a few points in time, resulting in a delay delivering technical training to users. The project also suffered from a reduction from four to two project staff for various reasons.

Other challenges exist at the college level. Much more work is needed to drive adoption of the tool by creating a culture of data-driven decision making and providing additional trainings. In addition, smaller colleges face the biggest resource constraints, implementing the system with fewer staff. These colleges are less likely to have the capacity to generate their own customized data dashboards.

According to the project director, having clear and ongoing communication from a single point of contact with all stakeholders has facilitated implementation of QUINN. The steering committee also credits strong state-level IT project managers and staff with successful system implementation.

Figure B.7. Strategy 7 (QUINN) logic model

Inputs	Activities	Outputs	Outcomes
Technological skills of user population	**Community colleges**	**Community colleges**	**Community colleges**
Strategy-specific inputs	Access pre-created data dashboards on VCCS website	Single source of accurate data	Improve fiscal decision making and revenues by better managing finances and student financial aid information
Technology—relies on interface between administrative data systems and middleware platform	Run queries to produce additional data dashboards and reports on topics of interest	More timely distribution of data to college leaders and staff	More efficiently manage human resource issues by analyzing data on hiring and firings and preparing for staff turnover
VCCS system lead, IT, student academic affairs, and institutional research support of the system		More staff analyzing data to inform decision making	Improve student services and instruction by analyzing data on student outputs and outcomes
Faculty and staff awareness and understanding of QUINN			**Students**
Faculty and staff perceptions of QUINN data reliability and system ease of use			Improve outcomes related to academic performance and financial aid
Regional monthly web-based training and self-paced training			
Tool to assist colleges in writing queries to answer specific research questions			
Site visits to select colleges to offer additional implementation support			
Communication regarding the system and its purpose			

Context

Potential client population

- College leaders and staff at all levels

Other factors

- Limited personnel resources at smaller colleges to develop individualized dashboards
- Lack of culture around data-driven decision making at colleges

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