The Second Year of Accelerating Opportunity

Implementation Findings from the States and Colleges

Theresa Anderson
THE URBAN INSTITUTE

Lauren Eyster
THE URBAN INSTITUTE

Robert I. Lerman
THE URBAN INSTITUTE

Carolyn O'Brien
THE URBAN INSTITUTE

Maureen Conway
THE ASPEN INSTITUTE

Ranita Jain
THE ASPEN INSTITUTE

Marcela Montes
THE ASPEN INSTITUTE

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Executive Summary

Launched in 2011, the Accelerating Opportunity (AO) initiative aims to help students who have low basic skills to earn valued occupational credentials, obtain well-paying jobs, and sustain rewarding careers. The model focuses on students who score between the 6th- and 12th-grade level in basic skill areas but who are interested in earning technical credentials. In particular, AO is designed for adult education students who lack high school diplomas or the equivalent. AO encourages states to change the delivery of adult education for these students by allowing community and technical colleges to enroll them in for-credit career and technical education (CTE) courses at the same time as they earn their high school credentials, improve their basic academic skills, or build their English language abilities. The CTE programs in which students enroll are structured as credit-bearing college and career pathways with enhanced support services. Each pathway must incorporate integrated instruction, which combines basic skills and technical training that is contextualized for the occupation targeted. This approach not only makes CTE courses accessible for students with low basic skills but also is intended to enhance the quality of instruction by having an adult education instructor "team-teach" with the CTE instructor. AO is also designed to change how states and colleges coordinate with government, business, and community partners by reforming policy and practice to make it easier for students with low basic skills to access and succeed in postsecondary education and the workforce.

Four states—Illinois, Kansas, Kentucky, and North Carolina—received grants to begin implementing the AO model in the 2012 spring semester and oversaw the development of career pathways in 33 community and technical colleges. A fifth state—Louisiana—began implementation in the 2012 fall semester at nine additional colleges. While North Carolina left the initiative in late 2012, the initiative evolved and expanded in the continuing four states over its first two years. Seven new colleges joined the initiative and one left, resulting in 40 participating colleges by the end of the second year (though this report includes data for the college that left, making the total 41 colleges). These 41 colleges reported enrolling 5,244 students across both years, with a 21 percent increase in enrollment from the first year to the second. The colleges also were able to expand their pathway offerings, increasing from 89 unique pathways in the first year to 120 in the second year. This growth in colleges, pathway offerings, and number of students served allowed states to improve their capacity to meet students' educational and employment needs. As of the end of the second year of implementation, colleges had awarded 6,248 credentials and 35,514 credits to AO students. Employers hired 1,629 students (almost a third of those served), and 84 percent of students were hired into jobs related to their AO training. These numbers do not represent AO impacts, but they are promising outcomes.[1]

Jobs for the Future (JFF) manages the initiative and partners with the National College Transition Network, the National Council for Workforce Education, and the Washington State Board for Community and Technical Colleges to provide states with technical assistance. A consortium of foundations, including the Bill and Melinda Gates Foundation, the Joyce Foundation, the W. K. Kellogg Foundation, the Kresge Foundation, the University of Phoenix Foundation, and the Open Society Foundations, has provided funding for the AO initiative.

As a part of a rigorous evaluation of the AO initiative, this report documents and assesses the first two years of the AO initiative in the four states active in both years. This period covers the spring 2012 to fall 2013 semesters in Illinois, Kansas, and Kentucky, and the fall 2012 to summer 2014 semesters in Louisiana. The data presented in this report come from a survey of all AO colleges, site visits to the participating states, program documentation, and quarterly calls with AO states and colleges. A report on a spring 2014 survey of AO participants complements this report and is being released concurrently (**Spaulding and Martin-Caughey 2015**). Together, these reports offer lessons for other states and colleges considering the AO model.

Findings

The first two years of the AO initiative represented a period of growth and change for the states and colleges, as they came to understand this new model for serving low-skilled adults and learned how to implement AO effectively in their state and colleges. The findings in this report focus on the development of the initiative in the second year and on changes from the first year of implementation. For consistency in these comparisons, the detailed findings are limited to the 34 colleges that participated in AO across both years.

Colleges Aligned Pathway Offerings and Supports to Respond to Local Context, Particularly to Employers

During the first year of the initiative, AO colleges worked intensively to roll out pathways quickly and build the necessary infrastructure and supports to deliver integrated instruction and team teaching. For instance, in the first year, when selecting the occupational areas that pathways would target, many institutions prioritized institutional factors, such as the support of CTE faculty for the AO model or enrollment requirements for certain pathways. By the second year of the initiative, states and colleges

had more experience with the AO model and could be more strategic about how pathway offerings could match the needs of both students and local employers. Manufacturing and health care remained the most common occupational areas, at 35 and 33 percent, respectively, of career pathways. With guidance from AO state teams, some colleges discontinued pathways in occupational areas that did not lead students to family-sustaining wages, and some created new pathways that they thought would better address local needs.

Students Were Satisfied with AO

Students in focus groups said AO had been a positive experience for them. Most students noted that they had received assistance with enrolling in AO college classes and that they continued to receive supports while enrolled in classes. They saw the team teacher as an especially valuable support. Participating students were also interested in the AO occupational areas, and a number of students had found employment in their field of study. Others discussed plans to continue studying to achieve higher credentials. Much more information about student experiences can be found in Spaulding and Martin-Caughey (2015), which reports on results of the participant survey fielded in spring 2014.

Integrated Instruction and Team Teaching Methods Continued to Vary, but AO Instructional Pairs Grew More Adept at Implementation

During the first year of the initiative, colleges prioritized training the first teams of CTE and adult education faculty in integrated instruction, which includes contextualized instruction and team teaching methods. By the end of the first year, all colleges in these four states had begun team teaching, implementing diverse styles across colleges and classrooms. Some colleges struggled, however, to increase buy-in and support of team teaching from CTE faculty, who were hesitant to collaborate with an additional instructor in their classrooms. Both state and local AO program staff indicated that increasing buy-in for AO and team teaching among CTE faculty and staff was a major priority, not only to promote collaboration between adult education and CTE but also to scale the AO model in these and new colleges.

In the second year, colleges continued to bring new faculty into the initiative and train them in team teaching and integrated instructional approaches. Colleges and teaching pairs also continued to implement team teaching in varied styles. These styles range from the traditional team teaching method, where the CTE and adult education instructors share teaching duties with each focusing on his

or her area of expertise, to the monitoring method, where one teacher is responsible for instruction while the other circulates around the classroom monitoring student needs. Survey results showed a slight increase in the use of more egalitarian and collaborative methods in the second year, such as the traditional team teaching method or the complementary-supportive method, where one teacher teaches content and then turns the class over to the other teacher to work on follow-up activities or study skills. Relatedly, the site visits indicated that many CTE instructors who were initially skeptical of team teaching began to see the value of having a second instructor in the classroom and found ways to optimize their time together. In addition, it appeared in some colleges that the AO team teaching experience raised the overall awareness of the adult education program and its students among CTE faculty and administrators, and it improved the institutional relationship between adult education and CTE programs.

Navigators Were a Key Support Service for AO Students

Comprehensive academic and social student supports to ensure that AO students are successful in the pathways program is a key aspect of the AO model. These provide extra help to AO participants, who often struggle to balance school, work, and family commitments. In the first year, colleges noted that more work was necessary to develop and provide access to comprehensive and consistent support services for AO students.

Based on the second-year site visits, the nature, intensity, and source of these services continued to vary across colleges. College staff widely recognized that a "navigator," "success coach," or "transition coordinator" outside the classroom was an important resource in connecting students to necessary services. In their survey responses, students echoed the sentiment that the navigation support was valuable; Spaulding and Martin-Caughey (2015) explore the student perceptions of support services in more detail. Colleges with a dedicated person in this role for AO were able to provide more individualized case management and tutoring services to participants than typically available to adult education or college students. Moreover, navigators were often instrumental in linking students to support services available both on campus and in the community. In places where coordinators or adult education instructors took on navigator responsibilities, state and college administrators expressed concerns about not having a dedicated navigator. Administrators were also concerned about the sustainability of funding for navigation after the AO grant ends.

Many Colleges Recruited Individuals with High School Diplomas or GEDs, Partly in Response to Eligibility Conditions on Federal Student Financial Aid

The JFF staff and partners involved in designing and implementing AO, as well as AO grantee state leadership, anticipated that adult education students without high school credentials would be able to access federal financial aid (Pell grants) to pay for the program. Soon after the initiative started in 2012, the federal rules changed so these students could no longer qualify for federal financial aid through the Ability to Benefit provision. This meant that students enrolling into AO programs would need to pay for their own college tuition costs. This federal policy change heavily affected colleges' ability to recruit adult education students lacking high school credentials, who would have to find other ways to finance their participation in AO pathways.

In response, many AO colleges, particularly in Kentucky and Kansas, heavily recruited students who tested between 6th- and 12th-grade skill levels, already had high school credentials, and were already enrolled in the colleges' developmental education or CTE programs. In the first year, 77 percent of students enrolled in AO programs had high school credentials. In the second year, colleges continued to heavily enroll students with high school credentials; the share increased to 87 percent. During site visits, a common sentiment among stakeholders and college staff was that students who had completed high school or the equivalent but tested within the skills range to qualify for AO still have basic skills deficiencies and can benefit from the AO services. Students in focus groups who had high school credentials also expressed that they would not be as successful without AO structures.

States and Colleges Sought New Sources of Financial Support for Students Lacking a Diploma or GED

Throughout the initiative, states and colleges have tried strategies to increase the number of adult education students enrolled in AO programs (i.e., those without a GED or high school credential). Each state took a slightly different approach, but all states focused on finding alternative ways to fund tuition for students lacking high school credentials. Institutional tuition waivers and Workforce Investment Act (WIA) funds were common funding resources across all states. These resources could be accessed by students with or without high school credentials, though it was sometimes easier for students with high school credentials to get WIA funds. Kansas came to an agreement with the state Department for Children and Families (DCF) to provide tuition for those eligible for cash assistance, and Louisiana approved legislative appropriations to support student tuition.

Colleges Struggled to Recruit Adult Education Students

In spite of intentional efforts to overcome tuition funding challenges for students without high school credentials, second-year survey data indicate that the number of incoming students without high school credentials decreased from 23 percent to 13 percent. Louisiana saw a large decline in the proportion of students entering without high school credentials, from 79 percent to only 34 percent. Illinois had a relatively large proportion of entering students without high school credentials in the first year; by the second year, however, entering students were comparable with other states' students in secondary school completion. In Kansas and Kentucky, the proportion of AO entrants with secondary school credentials changed little in the second year and remained high, at 92 and 97 percent, respectively. Various stakeholders explained in interviews that they did not see this as a problem, believing that AO helps give students both with and without high school credentials the ability to succeed in college-level courses through the provision of additional supports, particularly team teaching.

Colleges Further Developed Internal Partnerships

During the first year of implementation, engaging partners from different areas within the colleges proved crucial for the success of the AO model. In the first-year survey, 71 percent of colleges identified bridging "silos" within the college as a challenge. Almost all these colleges noted this challenge was somewhat or largely resolved in the second year; only 18 percent believed that silos remained a major challenge. Further, interviews with college and state stakeholders suggest that internal partnerships were developed or enhanced in the second implementation year. In particular, AO staff throughout the initiative reported important progress in strengthening the relationship between the CTE and adult education departments. Many college staff and administrators spoke about increased awareness throughout the college of the needs of adult education students. Many interviewees also noted strengthened relationships with admissions offices and financial aid departments and the importance of these partnerships in helping students access and stay enrolled in AO integrated career pathways. Several colleges instituted teams of high-level administrators to discuss issues related to AO students and structures. These teams may aid with the sustainability of the partnerships fostered by the initiative.

Colleges Developed and Expanded Partnerships with Employers

In the first year, AO colleges' partnerships with employers were mostly in nascent stages, and the majority of stakeholders interviewed identified employer engagement as an area for improvement. The

second-year survey included additional questions to better capture college progress in this area. In the second year, 62 percent of the 34 colleges reported at least one employer relationship; among this 62 percent, each college averaged 5.3 employer partners, for a total of 111 employer partners. The top two roles for employers were hiring students (50 percent) and interacting with students by giving presentations on campus, providing mentors, or allowing for job shadowing (42 percent). Only 21 percent of employer partners provided work-based learning options, such as internships, to AO participants. While college staff and administrators used existing relationships and systems, such as CTE advisory boards, to reach out to employers about AO, determining how to engage them meaningfully continued to challenge colleges. Several colleges indicated that they intended to continue building employer relationships.

Colleges Served More Students with Fewer Resources

AO colleges contributed nearly $13.7 million in resources across all four states and both years to ensure that adults with low basic skills could complete career-oriented education and move into jobs with family-sustaining wages. During the first year of the initiative, the resources colleges spent on AO were mainly concentrated in start-up activities to develop pathways and garner support from relevant partners. Start-up efforts tended to consume a considerable amount of staff time, especially at the leadership level. More expensive personnel costs were a main start-up resource that contributed to overall higher expenditures in the first year.

In the second year, the average value of resources expended on running AO across the colleges decreased by 14 percent and the median value of resources declined 18 percent (from $232,088 to $191,000), even as the number of pathways, students, and outputs increased. Thus, across all states, the resources put toward each credit, credential, and pathway decreased from the first to the second implementation year. Although the primary resource expended continued to be staff time, survey results show that the proportion of time spent by leadership in the initiative decreased while the proportion of time spent by staff and faculty increased. This important shift suggests that the initiative has likely transitioned from the start-up period to a more established implementation period.

Three States Changed State Funding Policies to Support and Sustain AO

Beyond efforts to support student costs for enrolling in AO, states repurposed or developed new funding policies to support the programmatic costs of AO implementation and to aid in its sustainability

after the end of the grant period. The Illinois Community and College Board modified policies to be able to use Perkins funds toward AO; these funds were previously mostly used by the K–12 system. Shortly after the second year, the Kansas legislature approved nearly $14 million to support AO and career pathways, $12 million for student tuition and $1.9 million as incentive funds to colleges that transition adults without secondary school credentials into CTE. The Louisiana legislature created the Workforce and Innovation for a Stronger Economy (WISE) fund, which provides $40,000,000 annually for collaboration between postsecondary institutions and workforce organizations in high-demand fields, directly benefiting AO programs. Moreover, the Louisiana Community and Technical College System procured $1 million in funds from JP Morgan and $4 million in matching funds from WISE, WIA rapid response funds, and WIA incentive funds to help support AO costs and to build up capacity to continue AO structures into the future.

All Four States Are Strategically Planning to Sustain AO after Grant Funding Ends

In the second year, states initiated strategic planning efforts to understand, develop, and support opportunities to integrate AO work into future programs. In conducting this planning, state stakeholders have included AO colleges in processes in order to understand which elements of the initiative, such as team-teaching and navigator positions, have been most beneficial. In Illinois, the 2009 adult education strategic plan is due for a revision in fiscal year 2015, and the Illinois Community College Board staff reported that it intends to include integrated instruction, bridge programming, and more collaboration with CTE as centerpieces of the revised plan. Similar to Illinois, the Kansas Board of Regents considers the AO initiative a permanent part of state operations to move more young adults into the workforce. In addition to procuring new funding streams, the Kansas state team has convened work groups to plan for implementation of "AO-K 2.0" once the initial initiative funding ends. Kentucky's cross-agency AO executive team has also formed a group of local- and state-level AO staff to determine what the program will look like after the grant ends. Finally, the Louisiana Community and Technical College System has identified the AO approaches of high-demand career pathways, co-enrollment, integrated instruction, and comprehensive support services as cornerstones of professional development and programming moving forward.

Progress toward Meeting the Goals of Accelerating Opportunity in the Second Year

During the second year of the initiative, states and colleges focused on building upon their first-year efforts. They used the opportunity to reflect on and make strategic decisions about how the AO model matches the needs of their students, their individual institutions, and their local labor markets. The two-year goals in the AO theory of change (see appendix A) guide this analysis of progress throughout the two years of the AO. While states are planning to sustain the initiative, uncertainty remains around how the model will look, whom it will serve, and how it will be financed and sustained after the grant ends.

Future Reports

The evaluation team will release a report on the impacts of AO on interim student academic outcomes in late 2015. Other future products include a final report on AO implementation, a report on AO student employment experiences based on a second-round participant survey, a quasi-experimental analysis of AO's impact on student earnings, and a cost-benefit analysis to determine how the social costs of AO compare to its benefits. A final brief will summarize high-level findings across all reports.

Introduction

Nearly one in five adult Americans display low literacy levels and nearly one in three display low numeracy levels, according to the Programme for the International Assessment of Adult Competencies (PIAAC), a comprehensive international test administered in 2011–12. Compared to the scores of other countries in the study, the US scores are weak on literacy and very poor on numeracy (OECD 2013). In addition, 15 percent of adults lack a high school diploma or general educational development (GED) credential. The March 2013 unemployment rate for adults ages 25–64 without high school credentials was 12.7 percent, more than double the 6.0 percent rate for 25- to 64-year-olds with at least high school credentials.[2] Moreover, many high school graduates are underprepared for postsecondary education and are placed in developmental education classes. By one estimate, community colleges referred approximately two-fifths of first-time enrolling students to at least one developmental math class and one-third to at least one developmental reading class (Bailey, Jeong, and Cho 2010). Given this, at least 30 to 60 million adults lack the skills required for most well-paying jobs; their low skill levels are associated with high unemployment and low earnings.

Existing adult education programs alone do not prepare low-skilled adults to qualify for the postsecondary credentials necessary for well-paying jobs. These programs—operated by community and technical colleges, school districts, and community-based organizations (CBOs)—are often oriented toward helping adults obtain a secondary school credential, such as a GED credential or adult high school diploma, or toward improving English language skills. However, these programs typically have few links to postsecondary education. Thus, few adult education students ever enroll in, much less complete, postsecondary education; this means that finding a well-paying job can be an insurmountable challenge to individuals with low basic skills.[3]

Launched in 2011, the Accelerating Opportunity (AO) initiative aims to transform how states and community and technical colleges train and educate students with low basic skills. The goal of the initiative is to increase the ability of students with low basic skills to earn valued occupational credentials, obtain a well-paying job, and sustain a rewarding career. The AO model focuses on comprehensive student support services, accelerated learning, aligning basic skills instruction with substantive technical concepts, and team teaching with adult education and occupational skills instructors working together in the same classroom.

Beginning with a design phase in fall 2011, 11 states developed plans for implementing the AO model in their own community and technical college systems. Four states—Illinois, Kansas, Kentucky,

and North Carolina—were selected to receive grants to begin implementing their plans on January 1, 2012. The implementation grants ran until fall 2014. Two additional states, Louisiana and Georgia, were awarded implementation funds in fall 2012. The US Department of Labor also awarded five colleges in Mississippi and six colleges in Louisiana a Trade Adjustment Assistance Community College and Career Training (TAACCCT) grant based in part on the AO model. This evaluation focuses on the implementation and impact of the AO initiative in Illinois, Kansas, Kentucky, and Louisiana. North Carolina transitioned out of the initiative in July 2013. Appendix B contains information about North Carolina's achievements in AO.

The Accelerating Opportunity Model in Brief

Funded by grants from a consortium of foundations and administered by Jobs for the Future (JFF), the AO initiative is a state-led effort.[4] State teams guide and fund participating community and technical colleges to develop college and career pathways for in-demand occupations that can become accessible to AO participants once they complete community college courses. Career pathways are sequenced education and training programs for fields of study that are in demand by employers.[5] Pathways are designed to make participation manageable for low-skill, low-income individuals with family and work commitments. The programs are designed to move students from entry-level to higher academic and vocational skills. In AO, the initial phase of the pathway consists of approximately 12 credits and typically takes one academic year or less. During the initial phase, a student earns a credential or set of credentials that employers value. Subsequent steps on the pathway allow students to earn additional credentials and degrees that will help them find mid- to high-skill jobs that pay good wages.

Beyond the establishment of career pathways, other key programmatic components of AO include integrated instruction, where basic skills and career and technical education (CTE) instructors teach in the same classroom (known as the "team teaching approach"); career pathways; a focus on comprehensive student support services; accelerated learning; and labor-market payoffs. JFF and its partners derived these approaches from Washington State's Integrated Basic Education and Skills Training (I-BEST) model and from the Breaking Through initiative. Although AO incorporates the key elements of these initiatives, it has a distinct design, with enhanced elements such as policy change, partnerships, and culture shift to institutionalize the model in these states. Box 1 summarizes the key "nonnegotiable" design elements of the AO model.[6]

The overall goal for the initiative is for each participating state to award at least 3,600 credentials within the grant period. Participating colleges must target recruitment efforts toward students who are within National Reporting System (NRS) levels 4–6 (6th- to 12th-grade level) on math, reading, or writing or NRS levels 5–6 (high intermediate to advanced) in English language skills. Finally, eligible students may or may not have high school diplomas or GEDs.

The states involved in the evaluation agreed to adhere to the AO model and the required program elements. AO's theory of change projects how the initiative can achieve positive impacts through its three primary components: college and career pathways, culture shift, and scale and sustainability. Cross-cutting activities within the AO theory of change include comprehensive student supports, stakeholder engagement, professional development, state technical assistance to colleges, policy, and leadership and staff commitment. The theory of change specifies two- and four-year outcomes as well as long-term goals for the system and students, respectively. Appendix A presents a description of the model and the theory of change.

BOX 1

Key Accelerating Opportunity Design Elements: "Nonnegotiable" Aspects of the AO Model

- Two or more integrated career pathways in at least eight colleges
- Acceleration strategies
- Academic and social student supports (e.g., tutoring, child care, transportation)
- Dual-enrollment strategies (e.g., paired courses, I-BEST, or I-BEST-like approaches)
- Marketable, stackable, credit-bearing certificates and degrees
- Award of some college-level professional-technical credits
- Partnerships with workforce investment boards and employers
- Evidence of strong local demand for selected pathways

Source: JFF (2011).

Growth of the Initiative

In the first year of AO, participating colleges built capacity to provide team teaching, offered comprehensive support services, and developed and strengthened partnerships to support the sustainability and scaling of AO. At the end of the first year, North Carolina left the initiative to pursue other priorities within the state, including its Basic Skills Plus program, detailed in the first-year AO report (**Anderson et al. 2014**).

In the second year, the AO initiative matured and evolved. In the first five semesters of the initiative, 34 colleges were involved across the four states: 8 in Illinois and Kentucky, and 9 in Kansas and Louisiana. Seven new colleges joined in fall 2013, the sixth semester of AO in the original three states. Illinois and Kentucky each brought on three new colleges, bringing their state totals to 11. Kansas added one, resulting in nine participating colleges in the fall 2013 semester. Also, toward the end of the second year, one Kansas college dropped out of the initiative, but its data are included in this report because the college responded to the second-year college survey. There were no changes in participating colleges in Louisiana throughout the first two years of AO. By the end of the second year, 40 colleges across four states were officially involved in the AO evaluation (though this report includes data for the college that left, making the total 41 colleges).

The Accelerating Opportunity Evaluation

The AO evaluation, led by the Urban Institute and its partners, the Aspen Institute and George Washington University, is a comprehensive assessment of the AO initiative that aims to produce valuable evidence for the field and to inform public policy on new approaches to serving the education and workforce needs of adults with low basic skills. The evaluation consists of three major components:

- **Implementation study:** A qualitative study of how AO integrated pathways were undertaken by the states and colleges, scaled, and potentially sustained and an analysis of how well the states and colleges implemented the AO model.
- **Impact study:** A quasi-experimental analysis designed to measure the effectiveness of the AO model based on its impact on the educational and labor market outcomes of AO participants, comparing them with similar students who did not participate in AO.
- **Cost-benefit analysis:** A comparison of the costs and benefits for states, colleges, and students engaged in the AO initiative.

This is the second report based on data collected as a part of the implementation study. It documents and assesses the first two years of the AO initiative in five states. The evaluation team will release a report containing participant perspectives and program and labor market experiences based on a survey concurrently with this report (Spaulding and Martin-Caughey 2015). In 2015, the evaluation team will release a study of the impact of AO on educational outcomes. The overall evaluation effort will culminate in a series of final reports covering each of the three evaluation components, to be released consecutively in late 2015 through late 2016 after the implementation phase of the initiative concludes.

Methodology

For the implementation study, the evaluation team collected data from AO state offices and participating colleges through site visits to each state, a college survey, a survey of participants in spring 2014, and quarterly calls with state and college teams. The evaluation team has also reviewed documents related to the initiative such as state policy plans, college pathway templates, progress reports, and outreach materials.

The team first visited the original four states in fall 2012 and Louisiana in summer 2013. The team conducted a second set of site visits, intended to capture data on the initiative after the second year, in spring 2014 to the original three states and in fall 2014 to Louisiana. During the visits, the evaluation team spent one day with state staff responsible for the initiative and their partners and one day each at two AO colleges. The evaluation team interviewed state and college staff and partners to document AO implementation, the context in which the college operated, and plans for the remainder of the grant. At most colleges, the evaluation team also met with external partners, including CBOs, employers, work-force agency representatives, and local government agencies. The site visits also included observations of AO classes and focus groups of AO students at each college. The evaluation synthesizes findings from the site visits across all these perspectives to provide a broad and rich picture of AO operations.

The evaluation team fielded two in-depth, web-based surveys to all participating colleges to obtain detailed data on the implementation of AO in each year of the initiative. The surveys collected data on the colleges' goals, the pathways implemented, student characteristics, the nature of the instruction and support services, the resources used to operate AO, partnerships, and sustainability plans. The surveys achieved a 100 percent response rate. The evaluation team verified reported resources expended on AO with each college through individualized exchanges in order to gather the most

accurate information possible. All data from these surveys come from self-reports by AO staff at the colleges. Future reports will analyze participants' individual-level data from each state.

Structure of the Report

This report builds on Anderson and colleagues (2014), which documented AO activities in the first year. Except the first section on overall achievements, which aggregates findings across all colleges ever involved in AO in Illinois, Kansas, Kentucky, and Louisiana, this report focuses on the experiences of the 34 colleges in these four states that were part of AO in both years of implementation.

Overall, this report examines the process of building and developing AO career pathways, recruitment and participant characteristics, the role of partners and employers in supporting student success, the resources expended, and the role of the state teams in supporting the colleges throughout the first two years of implementation. The report concludes with an assessment of the progress that states and colleges made by the end of the second year.

What Have the AO Colleges Achieved to Date?

The first two years of AO represented a period of growth and change for the colleges, as they came to understand this new model and determine how to implement it meaningfully within their institutions. JFF's ambitious goal for each state to award 3,600 credentials to AO students helped motivate colleges to scale up quickly and begin moving students into career-oriented programs. College administrators worked with their staff to align curricula, overcome institutional barriers (such as the structure of financial aid), and build up partnerships both within and outside their institutions to help these students be successful. Students in focus groups said AO had been a positive experience for them.[5]

This section of the report describes the AO achievements across all colleges involved at any point during the first two years of the initiative in Illinois, Kansas, Kentucky, and Louisiana. The number of colleges, pathways, students, and educational and employment outputs grew over the two years. New colleges joining AO contributed to the increase in program outputs, but colleges continuing from the first year also experienced program expansion.

Pathways Offered

The states and colleges offered many career pathway options to AO students during the first two years of the initiative. In the first year, colleges offered 89 unique pathways across the four states; in the second year, the number of unique pathways increased to 120. The count of "unique" pathways ensures that pathways are not double-counted across semesters. Table 1 shows this pathway growth. About half the growth results from new colleges joining the initiative in fall 2013. The growth in the number of pathways allowed the states and colleges to serve more AO students. It also meant that colleges offered a wider variety of career options to meet employer needs and student interests.

The colleges rarely created entirely new pathways for AO. Rather, most colleges adapted existing programs to the AO structure by adding team teaching and, at times, additional valuable credentials to existing sequences to meet the 12-credit-hour expectation (e.g., adding phlebotomy to a health care

pathway). In some cases, colleges had to negotiate a waiver of admission requirements and/or prerequisites for existing program sequences to be able to enroll AO students.

TABLE 1

Active Pathways in First Two Years of Implementation

By state and semester

Semester	1	2	3	4	5	6[a]	Unique, year 1	Unique, year 2
All states	**52**	**47**	**78**	**88**	**55**	**95 (13)**	**89**	**120**
Illinois	11	7	19	22	8	25 (3)	19	26
Kansas	19	11	27	29	19	30 (3)	27	38
Kentucky	13	10	18	20	9	26 (7)	22	32
Louisiana	9	19	14	17	19	14 (0)	21	24

Sources: Year 1 and Year 2 AO college surveys.

Notes: The first semester was fall 2012 in Louisiana and spring 2012 in the other states. Year 1 refers to the first three semesters in each state, and year 2 refers to the second three semesters. The summer is its own semester. "Unique" pathway counts are unduplicated across semesters.

[a] Numbers in parentheses indicate the number of pathways at colleges that joined the initiative in the second year. They are subsets of the semester 6 totals listed to the left.

Students Enrolled

AO served 5,266 students during the first two years in these four states (table 2). In the first year, 2,370 students enrolled; in the second year, another 2,874 enrolled. Kansas achieved the highest AO student enrollment in both years, serving more than 2,100 students in all. Kentucky generated the next-highest enrollment numbers, at about half of Kansas's enrollment. However, Louisiana enrolled more students than Kentucky in the second year. Illinois followed closely behind Kentucky and Louisiana in both years. The Kansas approach of recruiting existing CTE students probably facilitated rapid enrollment of more students; this is discussed in more detail later in the report.

TABLE 2

New Students Enrolled in AO

By state and implementation year

	Year 1	Year 2[a]	Total
All states	**2,370**	**2,874 (187)**	**5,244**
Illinois	419	499 (20)	918
Kansas	1,001	1,190 (79)	2,191
Kentucky	499	579 (88)	1,078
Louisiana	451	606 (0)	1,057

Sources: Year 1 and Year 2 AO college surveys.
Notes: The first semester was fall 2012 in Louisiana and spring 2012 in the other states. Year 1 refers to the first three semesters in each state, and year 2 refers to the second three semesters. The summer is its own semester.
[a] Numbers in parentheses indicate the number of enrollees at colleges that joined the initiative in the second year. They are subsets of the year 2 totals listed to the left.

Credentials and Credits Awarded

Based on self-reports, AO colleges had awarded 6,248 credentials and 35,514 credits by the end of the second year (table 3). From the first year to the second, the number of credentials and credits awarded increased substantially in all states, especially the number of credits awarded in Kansas.

TABLE 3

Credentials and Credits Awarded in AO

By state and implementation year

	Credentials, year 1	Credentials, year 2[a]	Credits, year 1	Credits, year 2[a]	Total credentials	Total credits
All states	**2,589**	**3,659 (136)**	**12,715.5**	**22,798.3 (2,040.8)**	**6,248**	**35,513.8**
Illinois	581	729 (7)	4,221.0	4,495.0 (158.0)	1,310	8,716.0
Kansas	1,190	1,440 (19)	4,802.5	12,347.5 (1,042.0)	2,630	17,150.0
Kentucky	449	754 (110)	2,063.0	3,322.8 (840.8)	1,203	5,385.8
Louisiana	369	736 (0)	1,629.0	2,633.0 (0.0)	1,105	4,262.0

Sources: Year 1 and Year 2 AO college surveys.
Notes: The first semester was fall 2012 in Louisiana and spring 2012 in the other states. Year 1 refers to the first three semesters in each state, and year 2 refers to the second three semesters. The summer is its own semester.
[a] Numbers in parentheses indicate the number of credentials and credits at colleges that joined the initiative in the second year. They are subsets of the year 2 totals listed to the left.

JFF's goal was for each state to award 3,600 industry-recognized credentials during the three-year grant period. Kansas awarded the largest number of credits and credentials in both implementation years and is on track to meet the 3,600-credential goal. Illinois and Kentucky colleges are less likely to meet that goal, but they have made substantial gains. Some of the progress in Kansas stems from the state's higher enrollment numbers. Also, Kansas AO students are more likely to be already enrolled in CTE programs and probably face fewer barriers to accessing college than AO students in other states.

It is unclear to what extent colleges track third-party credentials, and non-academic credentials were not included in administrative data provided by the state. Given that colleges may only track academic credentials, such as certificates, the total number of credentials in this section may be underreported. Credential counts do not include high school completion or equivalent. The nature of credentials varied widely across pathways and programs. The first credential earned in a pathway could range from a 0.5-credit OSHA safety certification or first aid certificate to a 50-credit heating, ventilation, and air conditioning (HVAC) certification. Given this variation, some pathways were associated with only one credential while others allowed students to earn multiple credentials within the initial phase. From the data available to date, it is unclear how employers value these credentials and how each credential has affected labor market outcomes. More information about the relationship between credentials and post-program earnings will be available in the evaluation impact study.

Placement and Employment

Colleges reported that AO students have attained promising employment outcomes in only two years (table 4). The table summarizes in-program work-based learning, including internships, externships, nursing clinicals, or apprenticeships with employers; new out-of-program employment; and new out-of-program employment in a job related to the field of training. These *outcomes* do not represent *impacts* of AO, since the evaluation team has not yet compared these participants to nonparticipants with similar characteristics to project what would have happened in the absence of AO. That analysis will appear in the final impact evaluation report in 2016.

During the first two years of implementation, 1,649 students were placed into work-based learning with employers. In these two years, employers hired 1,629 students. This represents nearly a third of all enrolled students during this period. Of those reported as hired, 84 percent were hired to fill jobs related to their AO training field. Kansas had the most work-based learning placements and students hired; moreover, the state's numbers increased dramatically in the second year. Louisiana also saw large

gains in the number of students hired and the number hired in their field of study. Across the two years, Louisiana colleges reported the largest proportion of AO students hired. Kentucky saw some decline in students hired and overall the lowest rate of hiring reported of the four states. Future evaluation activities will corroborate these numbers with student-level records. The net impact study, based on individual data, will analyze whether this figure is indicative of a substantial gain in earnings linked to AO participation.

TABLE 4

Student Employment Activities

By state and implementation year

	Year 1	Year 2[a]	Total	Share of enrolled students engaged in employment activities[b]
Placed in work-based learning				
All states	**663**	**986 (76)**	**1,649**	**31%**
Illinois	156	151 (0)	307	33%
Kansas	184	480 (55)	664	30%
Kentucky	192	210 (21)	402	37%
Louisiana	131	145 (0)	276	26%
Hired into any job				
All states	**457**	**1,173 (57)**	**1,629**	**31%**
Illinois	140	184 (0)	324	35%
Kansas	46	545 (28)	591	27%
Kentucky	139	107 (29)	246	23%
Louisiana	131	337 (0)	468	44%
Hired into a job related to training				
All states	**403**	**972 (45)**	**1,375**	**26%**
Illinois	109	131 (0)	240	26%
Kansas	62	492 (24)	554	25%
Kentucky	122	89 (21)	211	20%
Louisiana	110	260 (0)	370	35%

Sources: Year 1 and Year 2 AO college surveys.

Notes: "Hired" refers to students hired during each program year. The first semester was fall 2012 in Louisiana and spring 2012 in the other states. Year 1 refers to the first three semesters in each state, and year 2 refers to the second three semesters. The summer is its own semester.

[a] Numbers in parentheses indicate the number of employment activities at colleges that joined the initiative in the second year. They are subsets of the year 2 totals listed to the left.

[b] The numerators are the values in the "Total" column. The denominators are the total enrollment values in table 2.

How Did Colleges Build on Their Initial AO Implementation?

Pathways grew and changed throughout the first two years of AO, including changes in occupations targeted. Many integrated pathways developed in the first year of AO continued in the second year, as colleges refined their offerings to meet student and labor market demand and to address institutional constraints. Team teaching and provision of support services continued to be important elements of the initiative, though some colleges were still developing strategies to deliver necessary supports. In addition, there were shifts and variations in important AO model elements such as team teaching development, types, and intensity of support services, and program eligibility requirements.

The remainder of this report focuses on the development of the initiative in the second year and over the two implementation years. It is limited to the 34 colleges that participated in both years of AO.

Pathway Changes

A nonnegotiable element of AO is that each college offer at least two career pathways with an initial phase of about 12 credits. JFF and its partners chose the 12-credit pathway model leading to a credential because that was shown to be the "tipping point" for students to pursue further education and training, based on earlier research on Washington State's I-BEST model.[8]

The actual number of pathways offered varied across AO colleges. At one point, a Kansas college offered nine concurrent pathways as part of AO. Most colleges did not attempt to offer so many pathways, but almost all had at least two by the second year. The one exception was a Kentucky college that had been in AO from the beginning and that was operating only one pathway by the end of the second year.

In Louisiana, some colleges offered noncredit pathways in both years of the initiative, reportedly to be able to train workers quickly and to have more curricular flexibility than is allowed in for-credit programs. This practice does not align with the AO model and makes performance tracking and evaluation difficult. One college had no for-credit AO pathways, while one other college offered one

pathway as not-for-credit. In these cases, the colleges could award students some credits retroactively if the students received industry certifications and continued into an academic program.

AO colleges made changes to the number of pathways and the career fields in which pathways were offered. Some colleges added new pathways while others discontinued pathways, often in response to shifts in the local labor market. For example, a college in Kentucky implemented an early childhood pathway in fall 2013 in response to faculty support for the AO model and student interest in the training. However, the college subsequently dropped the pathway because it did not lead to jobs at family-sustaining wages. In Kansas, one college developed a pathway in aerostructures to meet the needs of a local aerospace employer, but this pathway was discontinued as a part of AO when the employer reduced the training requirement to only five credit hours (although the college still offers the training).

The HVAC pathway at another college in Kansas was not among the first pathways offered because there was no state-recognized early certification point at around 12 credits. However, the college added it in summer 2013 on the request of a CTE instructor, who was able to demonstrate high retention rates for the program. In that pathway, students earn their first credential after 50 credit hours. Toward the end of the second year, a college in Louisiana was exploring the possibility of creating pathways that would appeal to women with low skill levels who were not interested in careers in nursing or manufacturing technology. The coordinator was considering adding pathways in such industries as customer service, hospitality, or business and technology.

As in the first year, other career pathway grant initiatives that complemented the goals of AO also influenced pathways offered during the second year. These include the TAACCCT grant and the US Department of Health and Human Services' Health Profession Opportunity Grants (HPOG). Colleges often created pathways that could receive support from multiple grants, such as health pathways that could count as part of both HPOG and AO.

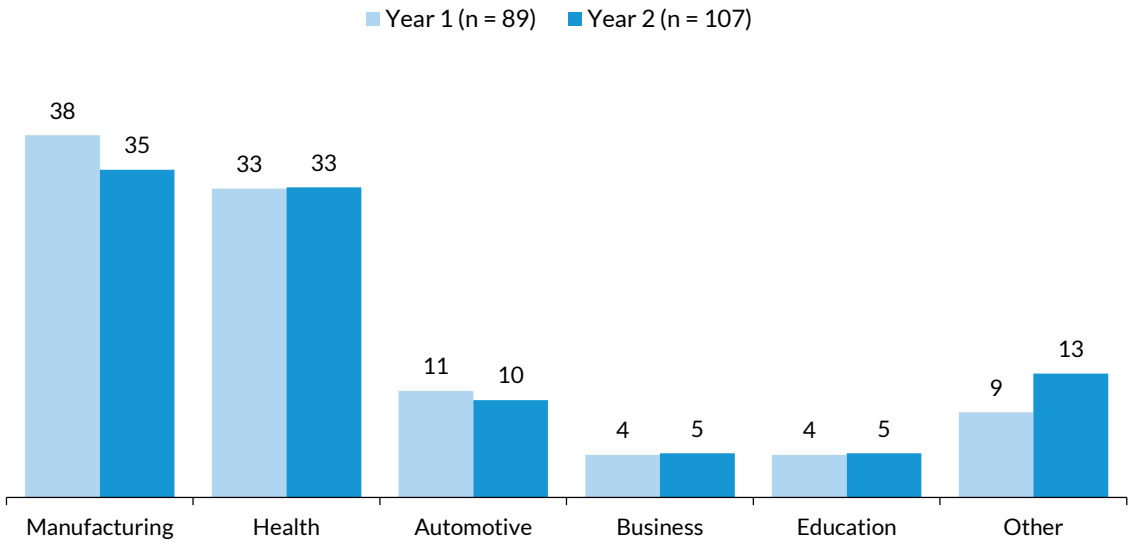
Pathway Occupational Areas

The occupational areas targeted in the 107 pathways offered in the second year by colleges that were active in both years of AO were similar to those targeted in the first year. Manufacturing remained the most common occupation represented, although it declined somewhat, from 38 percent of the pathways to 35 percent (figure 1). Health remained the second-most common occupational field, remaining steady at 33 percent of all pathways. Most of the change in "other" pathways is attributable to new industrial maintenance pathways in Kansas and Kentucky.

FIGURE 1

AO Pathway Occupational Categories by Implementation Year

Percent (%) of pathways



Sources: Year 1 and Year 2 AO college surveys.

The minor changes in pathway offerings may have stemmed partly from states modifying their guidelines for how colleges select AO pathways. For example, the Kentucky state team initially allowed the colleges flexibility in identifying industries to target in their pathways, in part to facilitate speedy statewide implementation. Colleges typically selected pathways in programs where there was buy-in and support from CTE staff or where there was interest in increasing enrollment. Recently, the Kentucky state team has encouraged colleges to use local labor market data to identify pathways that will lead to jobs with family-sustaining wages.

Other state teams have modified their guidance on pathway selection to accommodate local labor market needs demonstrated by the colleges. As part of pathway selection, the state AO team in Illinois initially reviewed labor market data to identify three high-demand industries (manufacturing, health care, and transportation and logistics) for the colleges to target. The state has since allowed colleges to add pathways in other industries, such as digital media, if they can demonstrate local demand for workers in the new sector.

Team Teaching Development

Based on the site visits and survey results, the intensity of and instructional methods used for team teaching continued to vary both across and within AO states during the second year of implementation.

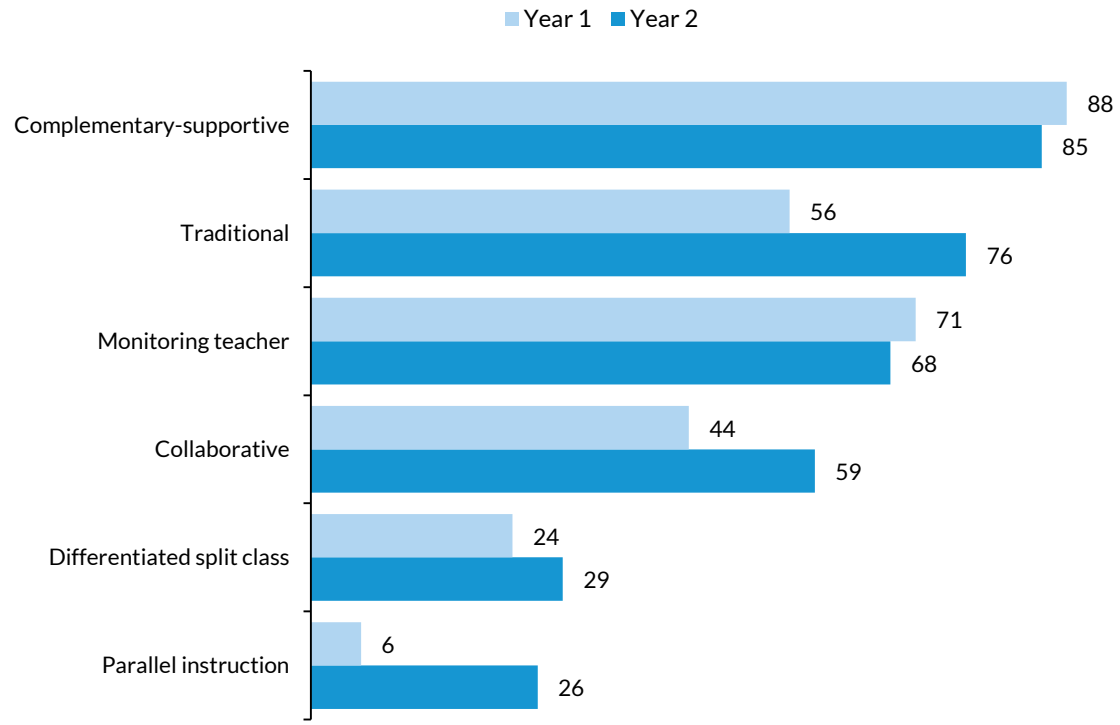
Although AO colleges were required to include team teaching (i.e., having both a CTE instructor and an adult education instruction in the classroom at the same time) for at least 25 percent of the instructional hours over the course of a term, the states encouraged varying degrees of instructor overlap. Kansas adopted the goal of a 25 percent instructor overlap, Kentucky encouraged its colleges to aim for a 35 to 50 percent overlap, and Illinois targeted an overlap of 50 to 100 percent. The Louisiana state team emphasized that the appropriate amount of team teaching overlap should vary depending on the type of course and the type of instruction occurring; it may range from 25 percent to 75 percent. In practice, colleges across states often implemented these guidelines to varying degrees, frequently influenced by the high costs of team teaching and lingering challenges associated with finding the most effective use of the shared instructional time.

Team teaching approaches also differed across states, colleges, and even individual pathways or classrooms. Figure 2 shows the teaching approaches used across the colleges; respondents were encouraged to identify all approaches used in their institution's AO program. In both years, almost all colleges implemented the complementary-supportive model of team teaching. In the second year, traditional and collaborative team teaching models became somewhat more common, while the monitoring teacher model became less common. This shift could represent a move toward a more egalitarian classroom where both teachers have equal footing, rather than one acting as an aide to the other. Interestingly, parallel instruction, which can be more or less egalitarian, depending on how the instructors implement it, also gained popularity.

FIGURE 2

Team Teaching Approaches by Implementation Year

Percent (%) of colleges (n =34)



Sources: Year 1 and Year 2 AO college surveys.

Notes:

Complementary-supportive teaching: One teacher is responsible for teaching the content to the students. The other teacher takes charge of providing follow-up activities on related topics or on study skills.

Traditional team teaching: Two or more teachers actively share the instruction of the content and skills in the same classroom at the same time with the same group of students. Each teacher performs a different but equally important instructional task.

Monitoring teacher: One teacher is responsible for instructing the entire class. The other teacher circulates around the room, watching and monitoring student understanding and behavior.

Collaborative teaching: Team teachers work together to teach the material not by the usual monologue, but by exchanging and discussing ideas and theories in front of the learners. The course uses group-learning techniques, such as small-group work, student-led discussion, and joint test taking.

Differentiated split class: A class with more than one teacher is divided into smaller groups according to learning needs. Instructors provide their respective group with the instruction required to meet their learning needs.

Parallel instruction: The class is divided into two groups, and each teacher is responsible for teaching the same material to her or his smaller group. This model is usually used in conjunction with other forms of team teaching.

Colleges also often offered contextualized supplemental instruction for AO students outside the CTE class. In the supplemental instructional sessions, adult education instructors reinforced basic skills in the context of the CTE material. Some colleges offered this supplemental instruction in addition to team teaching, while others offered it in lieu of instructor overlap. At times, the structure of integrated instruction varied among pathways within a college or even within sections of a class. The colleges' varied approaches to team teaching and supplemental instruction represent adaptations to the particular context of the institution, the pathway, the course content and setting, and the working styles of the instructors.

Similar to the first year, any given class may be restricted to AO students or, more commonly, have both AO and non-AO students in the same classrooms. In mixed classrooms, AO and non-AO students may experience team teaching. Or, the AO students may not receive team teaching in that class but may receive supplemental instruction outside class time to reinforce basic skills.

Several college administrators reinforced the importance of selecting adult education teachers for team teaching who were interested in and knowledgeable about the pathway occupation. For example, an adult education instructor at an Illinois college audited the CTE class to familiarize herself with the technical content before she began teaching the AO pathway. Administrators at a Kansas college chose adult education instructors for their assignments based on their background and experience, including one who was a former emergency medical technician and another who was familiar with welding concepts and terms.

Each instructional team developed its own practice for working together and incorporating the basic skills instruction based on their chemistry and experience. For example, one team observed during the site visits reported that it had initially set aside time for math instruction but later decided to contextualize the math-related material and incorporate it into exercises throughout the class. Some adult education instructors who worked with multiple CTE instructors used different formats in different classrooms, often depending on the receptiveness and preferences of the technical instructor and/or the needs of the students. Generally, the second year site visits revealed that many teaching teams had begun to settle into an approach that worked well for their team's chemistry, the needs of the students, and course content.

In many cases, JFF and its partners guided the instructional teams and helped them develop their approach through professional development and technical assistance. In the first year, 79 percent of colleges reported that at least half of their team teachers received training (35 percent reported that all team teachers received training). In the second year, 59 percent of colleges reported that at least half of

new team teachers received training (41 percent of colleges reported that all new team teachers received training). In addition to training, 85 percent of colleges reported receiving technical assistance with team teaching in the first year. Of these, 81 percent reported that this assistance was somewhat helpful or very helpful. In the second year, 38 percent of colleges received technical assistance, and all colleges reported that this assistance was somewhat helpful or very helpful.

Support Service Development

Comprehensive support services—academic, career, and personal—are another critical element of the AO model. They provide extra assistance to AO participants, who often struggle to balance school, work, and family commitments. Based on the site visits, the nature, intensity, and source of these services continued to vary across the colleges and pathways, with many still working through challenges to make these services available to AO students.

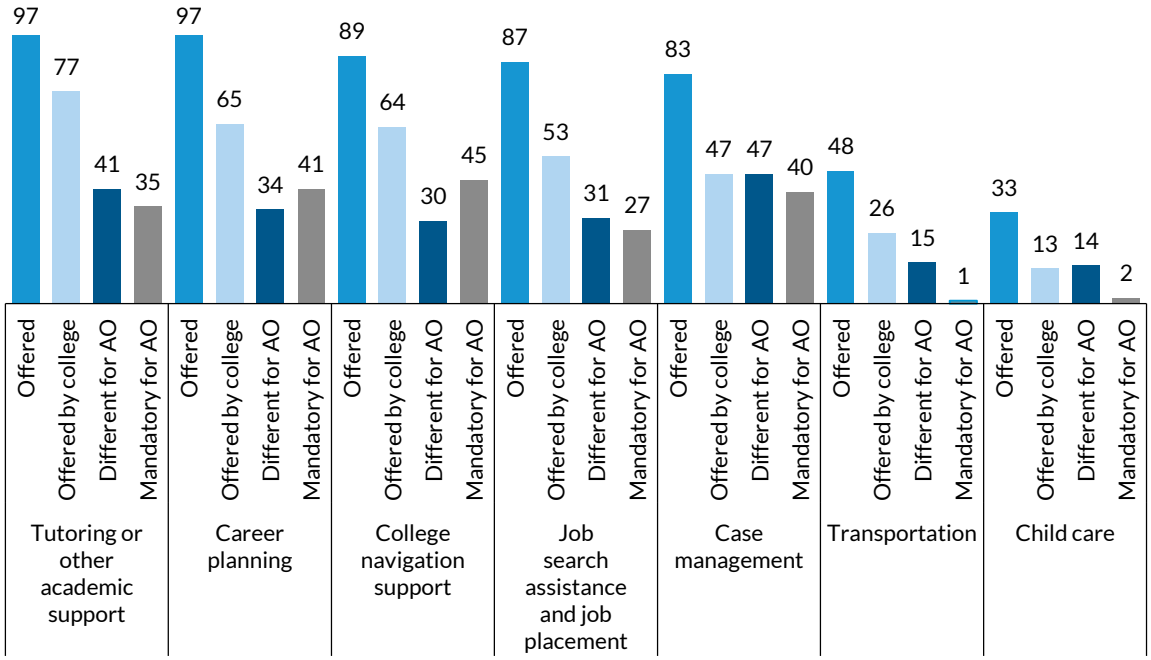
Of the 94 pathways with data on support services, almost all offered tutoring or other academic support and career planning, though in some cases these services were available through partner organizations (

figure 3). The vast majority of pathways also had college navigation support, job search assistance and job placement, and case management. Fewer had transportation and child care. Many pathways mandated that AO students use certain support services, particularly career planning, college navigation support, and case management.

FIGURE 3

Support Services Available to AO Students in the Second Implementation Year by Type

Percent (%) of pathways (n = 94)



Sources: Year 1 and Year 2 AO college surveys.

College administrators and staff generally reported that AO students were eligible for the same academic support services as non-AO students, usually available through on-campus learning or counseling centers. This shift is important because most adult education students not part of a program like AO do not have access to "college" resources and supports. Academic support services typically included tutoring, career counseling, financial counseling, advising, and access to computer labs. One exception is the Louisiana college that does not offer pathways for credit, where AO students cannot access resources available to traditional college students, including support services and the library.

In many cases, the difference in supports for AO students relative to other CTE students stemmed from the assistance of the adult education instructor in the classroom and the support of a "navigator," "success coach," or "transition coordinator" outside the classroom. This role is especially important because many community colleges have limited resources for student counseling or navigation support (Beach and Grubb 2012). In addition, staff and students at many colleges visited considered the provision of team teaching itself as a support service. Several college staff and administrators reported in the second year that AO helped them understand the importance of the roles played by the adult education instructor and the navigator. Other staff and administrators highlighted how the background

and experience of these individuals related to their knowledge of and links to support services on campus and in the community. Spaulding and Martin-Caughey (2015) share more about what supports students actually received and where students perceived gaps.

Many state and college administrators identified the limited resources available to fund targeted support services and navigator positions as a challenge, both in interviews and in the first year college survey. They expressed concerns about coordinators or adult education instructors taking on navigator responsibilities in addition to their other roles. This pattern raised concerns that staff felt overextended and unable to provide the navigation support that the students needed. Administrators also expressed concerns about the sustainability of funding after the AO grant ended. For example, in Kentucky, the state office funded an AO coordinator position at each college; this person also often filled the navigator role. Some colleges indicated that this coordinator/navigator was already overextended and worried about what would happen to student supports when that role was no longer funded.

To improve support services, some colleges developed or strengthened ties with local CBOs, workforce investment boards (WIBs), and other partner organizations in the second year. Several state and college staff noted that colleges that established and maintained links with CBOs and local workforce development agencies typically relied on these organizations to provide services to AO students. Partnerships and the role of partners in AO are discussed in more detail starting on page 42.

Many colleges brought together multiple grants within the same pathway to provide students with supports offered by each, such as navigators funded through TAACCCT grants or tuition and child care assistance from HPOG resources. Given the growing interest in and support for career pathway structures, many colleges found that these multiple funding sources came together naturally and provided stronger support to AO students.

Eligibility Requirements

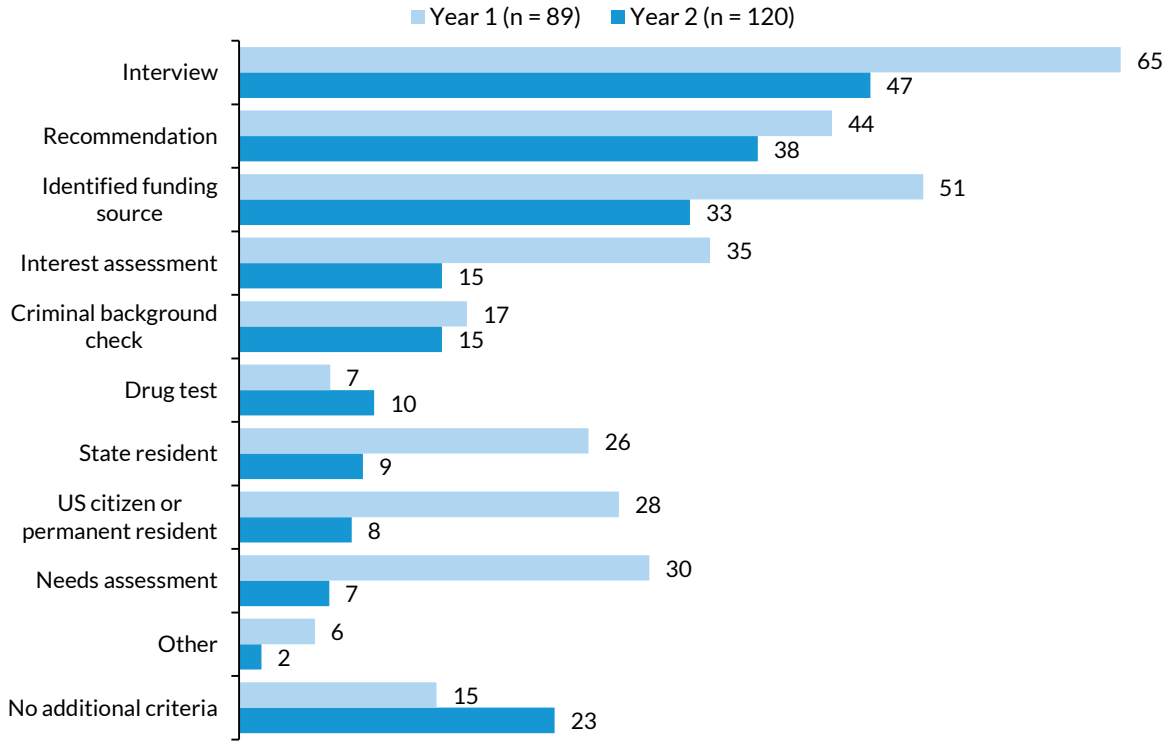
Colleges varied in the requirements imposed on incoming students. Per the model, students are eligible for AO if they score within NRS levels 4–6 (6th- to 12th-grade level) on math, reading, or writing or NRS levels 5–6 in English language skills. However, some pathways had higher test score requirements, only admitting students who scored at least at the 9th grade level. As in the first year, colleges administered basic skills assessments—such as the Test of Adult Basic Education (TABE), Comprehensive Adult Student Assessment Systems (CASAS), or the General Assessment of Instructional Needs (GAIN)—to determine AO eligibility.

By the second year, colleges eased the AO entry requirements beyond test scores. Between the first and second implementation years, the proportion of pathways without any requirements beyond test scores increased substantially, from 15 percent to 23 percent (figure 4). The only additional criterion that became slightly more common in the second year was a drug test.

FIGURE 4

Eligibility Requirements for Pathways beyond Test Scores by Implementation Year

Percent (%) of pathways



Sources: Year 1 and Year 2 AO college surveys.

Pathway Variation

Colleges can implement AO pathways in myriad ways that affect students' experiences. Understanding how the AO model has been implemented is a key concern of this evaluation. Pathway structure can vary across any of the dimensions discussed thus far: occupational category, credits offered, team teaching intensity and approach, supplemental instruction, types and intensity of support services, type of cohort, and eligibility requirements. While pathways vary within each dimension, most practices are

consistent with the AO model. Colleges have been able to adapt the AO approach to meet their own needs and contexts.

In addition to variations in pathway structure, institutional arrangements in support of AO pathways can differ. These might relate to the means of student recruitment, the types of students served, the venues of support service provision (i.e., services available in-house versus through partner organizations), the mechanisms for funding the initiative and the allocation of resources, and the role of the AO state team. The state-specific context in which the institutions operate also has an effect. The remainder of this report discusses each of these areas in turn.

What Types of Students Has AO Served?

Throughout the first two years of AO implementation, colleges recruited students from both the community and within the college. In both years, a large proportion of students came from CTE and developmental education programs within the college. This focus on CTE and developmental education students results partly from challenges in financing student tuition for those who lack high school credentials. However, it also reflects a general recruitment strategy to increase enrollment for an eligible segment of the student population, motivated by a desire to meet program goals quickly. With this heavy recruitment of students already enrolled in college programs, the emphasis of the initiative changed from access to higher education to retention and progression in higher education.

During site visits, a common sentiment among stakeholders/college staff was that many students who have high school credentials still have basic skills deficiencies and can benefit from the AO services. Students in focus groups who had high school credentials also expressed that they would not be as successful without AO structures. Some administrators and college staff suggested that the academic level among the students was similar, no matter where they were enrolled before AO. The student-level data will reveal if students who came from sources other than adult education were higher achieving at entry than adult education students, and this will be included in the impact reports.

Student characteristics changed in some important ways in the second year but remained consistent in others. The inter-state variation is likely an important reflection of local demographics and differential recruitment strategies.

Recruitment Sources and Strategies

The original intent of AO was to target adult education students lacking high school credentials. However, the loss of the Pell Grant's Ability to Benefit provision in July 2012 led most states and colleges to broaden their recruitment plans in order to meet program enrollment goals. The change in federal law, which barred students without high school diplomas or GEDs from receiving federal financial aid, continued to substantially affect the types of students recruited for and served by AO

throughout the second year of program implementation. Because students with high school credentials who test in the 6th- to 12th-grade skill range qualify for AO and Pell grants, most colleges began to focus recruitment on these aid-eligible students.

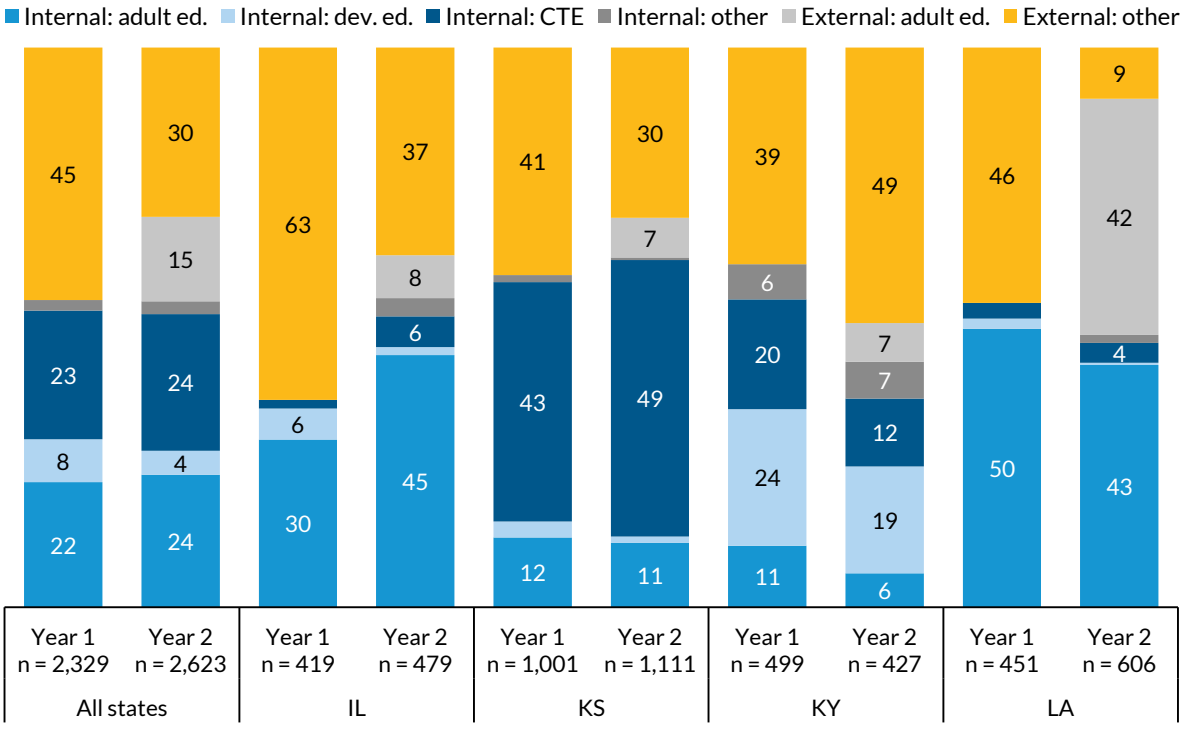
Recruitment Sources

Figure 5 identifies the recruitment sources for the four states across each year of AO, based on the college survey. The sources are divided into those that are internal to the college and external to the college. A student recruited from an internal source was in an in-college adult education, developmental education, CTE, or other college program immediately before enrolling in AO. A student recruited from an external source was not enrolled in the college immediately before enrolling in AO; they may have been referred by a CBO or recruited by word-of-mouth, for example. These figures are general estimates; future reports will provide more precise figures based on student-level records.

FIGURE 5

Recruitment Sources by State and Implementation Year

Percent (%) of AO enrollees



Sources: Year 1 and Year 2 AO college surveys.

The second-year survey also collected data on the number of participants enrolled in adult education programs external to the college immediately before enrollment; the first year survey did not make this distinction. The results show that, in the second year, recruitment sources were generally similar across the states to what they were in the first year. In the second year, 53 percent of Illinois students and 85 percent of Louisiana students came from internal or external adult education programs. In both years in Kansas and Kentucky, only a small share of students came from adult education programs. For all entering students in the second year, 24 percent came from internal adult education programs, still up from 22 percent in the first year, and another 15 percent came from adult education programs outside the college.

Recruitment Strategies

The small changes in the overall recruitment sources, however, mask some important differences in recruitment strategies among the states. Louisiana has consistently focused on the adult education population, though some colleges also test students enrolled in CTE courses to see if they qualify for AO and give them AO resources if they are eligible. Most Louisiana AO colleges grant tuition waivers to AO students who cannot afford to pay; the state office has interpreted tuition waiver rules broadly to allow them to apply to AO. In addition, the state office provided Workforce Investment Act (WIA) rapid response and incentive funds to help offset the college costs of running AO, and six of the nine colleges received large TAACCCT grants, which cannot be used for tuition but help with program costs.

Colleges in the other states expanded their recruitment efforts in the first year to focus on students who already had high school credentials or were already enrolled in college but still had low basic skills. Illinois colleges recruited heavily externally, leveraging partnerships with workforce agencies and local CBOs. Kansas colleges pulled from students in CTE programs, going into already-formed relevant CTE classrooms and testing all students to determine AO eligibility. According to staff at several Kansas colleges, the vast majority of CTE students had basic skills deficiencies and therefore met AO eligibility requirements, even though most had high school credentials. In those cases, AO staff gave the whole classroom AO resources, including a team teacher. Kentucky colleges focused heavily on developmental education students, who had secondary school credentials but had to take noncredit courses to bring their skills up to a college level.

By the second year, the Illinois and Kentucky state offices committed to targeting more individuals without high school diplomas or GEDs, primarily by encouraging colleges to recruit from adult education programs. These states aimed to finance students without high school credentials by finding

alternative tuition assistance sources, since federal aid was no longer available. Many Illinois colleges provided tuition waivers, and they expected that AO students who received this help would earn their GEDs before completing the AO pathway. The Kentucky state office tasked colleges with finding replacement resources for student financial assistance, such as tuition waivers or WIA funds, but its colleges were unable to waive tuition to the same degree as colleges in Illinois and Louisiana. Illinois did bring in a higher share of adult education students in the second year, but Kentucky colleges had limited success in changing the demographics of incoming students; the majority of AO students in Kentucky had high school credentials at enrollment.

The Kansas state office also recognized the need to reach out to more students without high school credentials, but it took a different approach. Instead of asking colleges to reach out more purposefully to adult education programs, the state office negotiated a tuition assistance program for students who received (or were eligible for) cash assistance from the state's Temporary Assistance for Needy Families (TANF) program. Many TANF recipients lack high school diplomas (Irving 2011), and the state office hoped that recruiting from this group would bring in more students without high school credentials. This agreement was in early implementation phases in the second year of AO, and few TANF recipients had enrolled in AO by the end of the second year.

Modes of recruitment were varied and at times creative. In addition to testing already-enrolled college students, AO colleges recruited participants and received referrals from on- and off-campus adult education programs, other on-campus departments or programs (e.g., advising or admissions centers), WIBs, alternative high schools, local probation programs, and related initiatives (such as HPOG). Some colleges reported developing AO program brochures that were distributed throughout the community or running advertisements in local newspapers. As time has passed, colleges have seen more word-of-mouth referrals, based on endorsements from satisfied AO participants and employers.

Student Characteristics

Not only did AO student enrollment increase in the second year, but student demographic and social characteristics shifted as well. The following figures provide an early picture of characteristics of students who enrolled in AO for the first time each year. Data are reported only for non-missing values; rates of missing data are high on some characteristics, such as employment status at entry.[7] These data should be read with caution and used only to provide an early look at who the AO students are. Future reports will offer detailed information on student characteristics based on individual records.

Student Demographic Characteristics

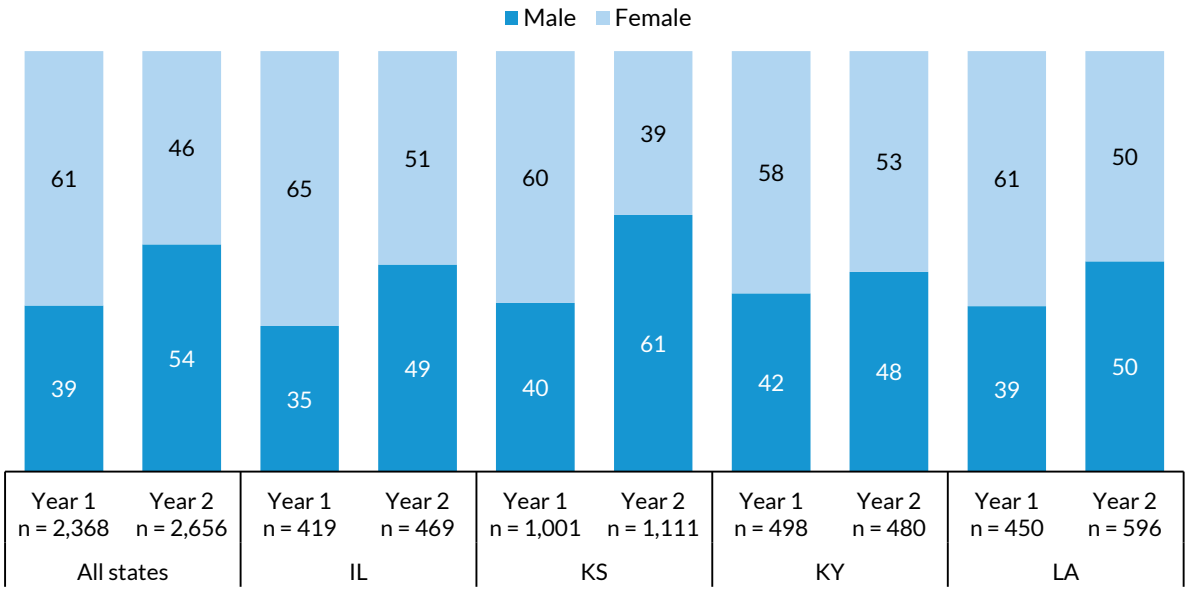
GENDER

Figure 6 shows the gender distribution of students who entered in each year of AO by state. More men than women entered in the second year, a change from the first year. This pattern was apparent in each state, though the shift was not as large in Kentucky as in the other two states. It is unclear why this shift occurred, but some explanations may include changes in recruitment strategies, enrollment criteria, and pathways offered in the second year.

FIGURE 6

Entering Student Gender by State and Implementation Year

Percent (%) of AO enrollees



Sources: Year 1 and Year 2 AO college surveys.

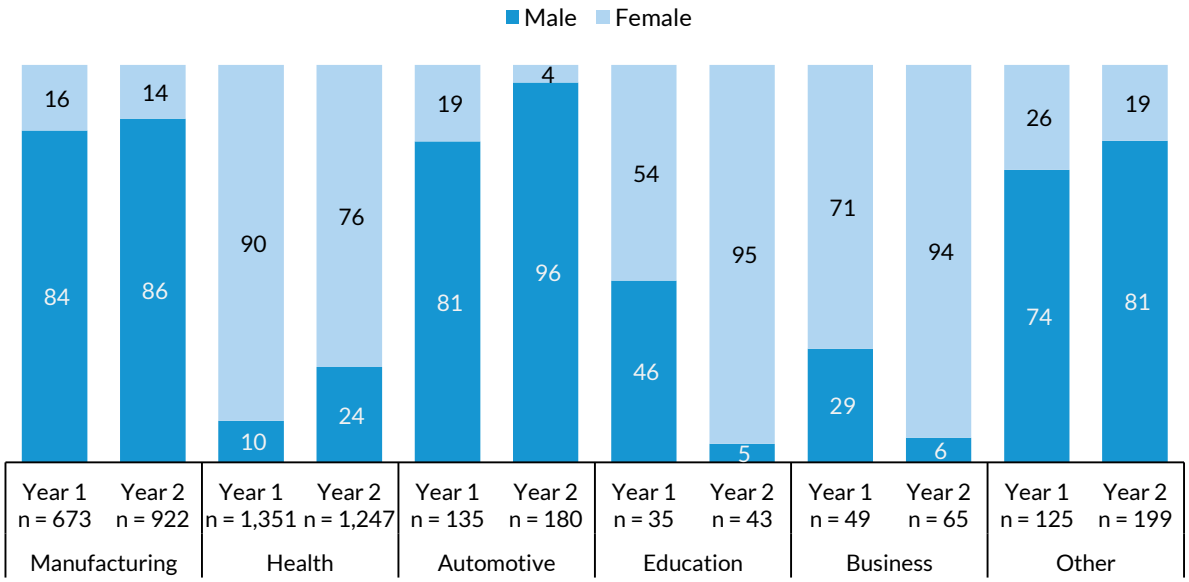
The occupational areas of pathways offered related closely to gender, with a much higher proportion of male students in manufacturing and automotive pathways and a much higher proportion of female students in health pathways (

figure 7). In the second year, a somewhat higher proportion of men enrolled in health pathways and a lower proportion of men enrolled in education and business pathways. Enrollment in manufacturing increased 37 percent while enrollment in health declined 8 percent. This change might partially explain the overall gender shift in AO enrollment.

FIGURE 7

Entering Student Gender by Pathway Occupational Area and Implementation Year

Percent (%) of AO enrollees



Sources: Year 1 and Year 2 AO college surveys.

AGE

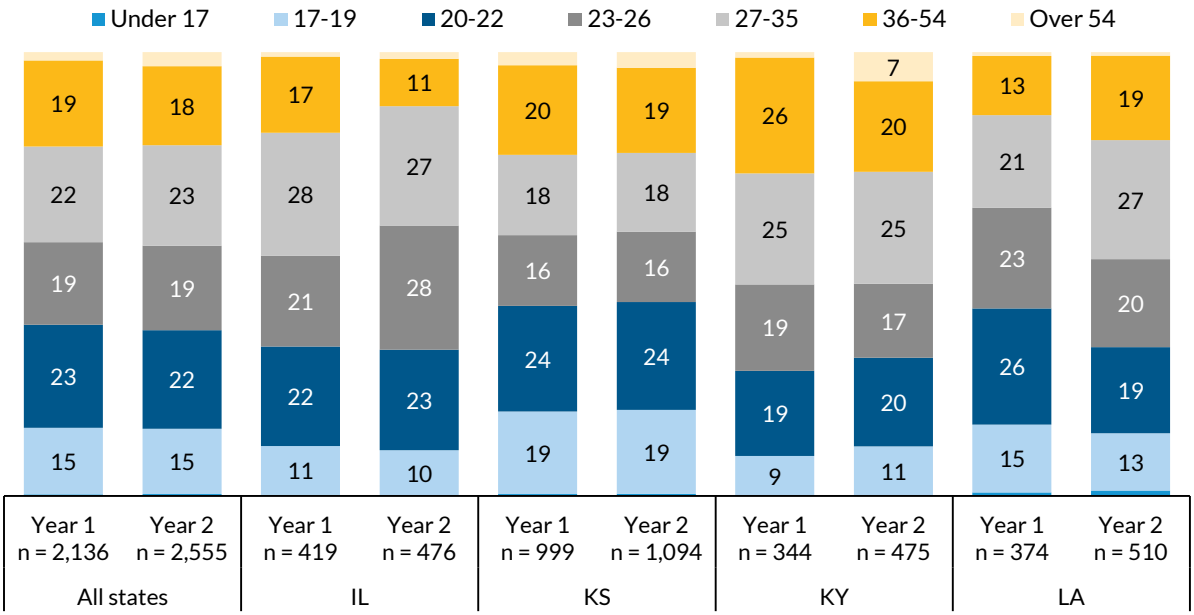
The age distribution of students entering AO did not change substantially (

figure 8). The median age of enrollees in all states except Kentucky was in the 23–26 range; in Kentucky, students were somewhat older, with a median age in the 27–35 range. Kentucky also enrolled somewhat more students in the second year who were over age 54. Illinois saw a slight increase in the proportion of entering student ages 23–26 and a decline in the proportion of students ages 36–54. Overall, most AO students were beyond the standard age norm for completing formal education, and about 40 percent were in their late 20s or older.

FIGURE 8

Entering Student Age by State and Implementation Year

Percent (%) of AO enrollees



Sources: Year 1 and Year 2 AO college surveys.

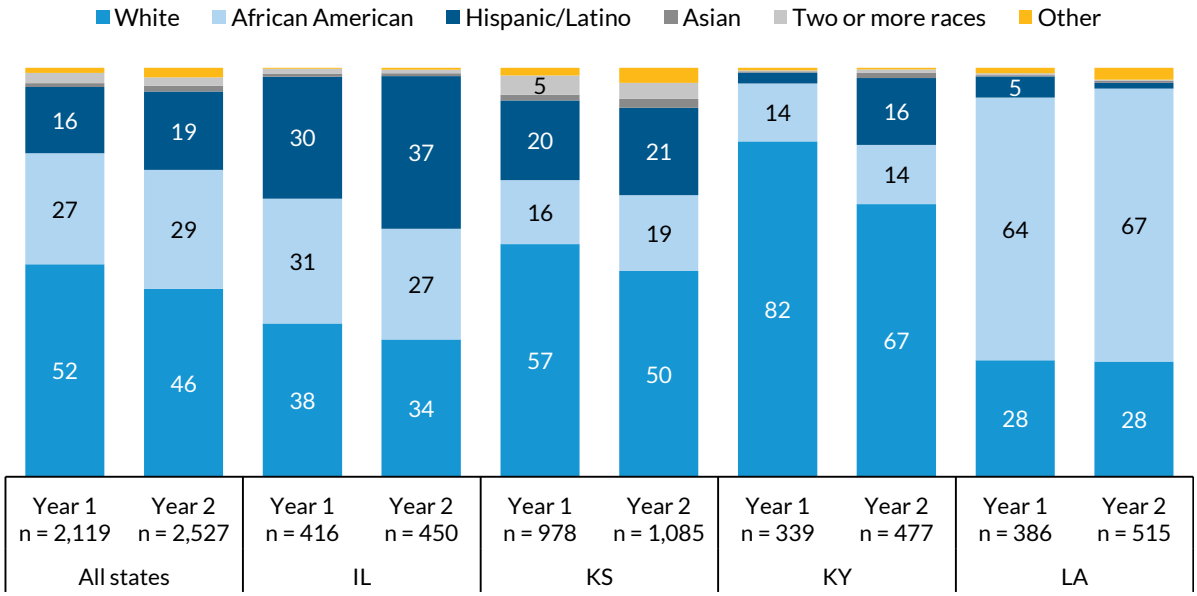
RACE

Figure 9 displays the racial distribution of entering students. The AO survey listed Hispanic/Latino as a race. Illinois overall had a much larger proportion of entering students identified as Hispanic/Latino than the other states, and this proportion increased slightly in the second year. However, Kentucky greatly increased the proportion of Hispanic/Latino students from very little to 16 percent. This could be an artifact of filling in missing data, but it is a notable change. Louisiana by far had the most students identified as African American, who composed about two-thirds of the new enrollees in each year. Illinois, Kansas, and Kentucky saw greater minority participation in AO in the second year, with the proportion of entering students who were white declining.

FIGURE 9

Entering Student Race by State and Implementation Year

Percent (%) of AO enrollees



Sources: Year 1 and Year 2 AO college surveys.

Other Student Characteristics

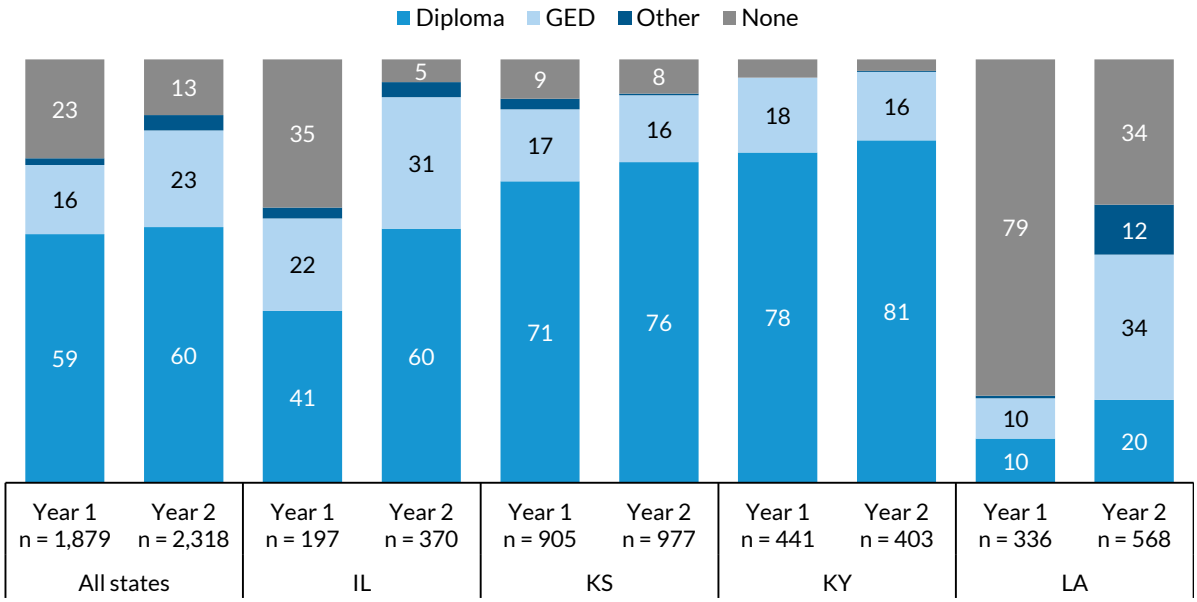
EDUCATIONAL ATTAINMENT

The vast majority of AO students had high school credentials at enrollment across all states (figure 10). Louisiana saw a large decline in the proportion of students entering without high school credentials, from 79 percent to only 34 percent. This lower percentage of students without high school credentials in the second year is still larger, however, than the values in the other three states. Illinois had a larger proportion of entering students without high school credentials in the first year, but by the second year, entering students were comparable with students in other states in secondary school completion. In Kansas and Kentucky, the secondary school credentialing of AO entrants changed little in the second year and remained high. This pattern likely relates to the challenges faced with funding students who lack secondary school credentials. However, conversations with the staff and students during the site visits revealed that even students with high school credentials benefited from the extra support offered through AO.

FIGURE 10

Student Educational Attainment at Enrollment by State and Implementation Year

Percent (%) of AO enrollees



Sources: Year 1 and Year 2 AO college surveys.

The proportion of students recruited from adult education in most states is higher than the proportion without a high school credential entering AO. This may be because many adult education students were encouraged to finish their GEDs quickly before enrolling in AO, so the colleges recruited them from adult education but many obtained a secondary school credential before enrollment in AO.

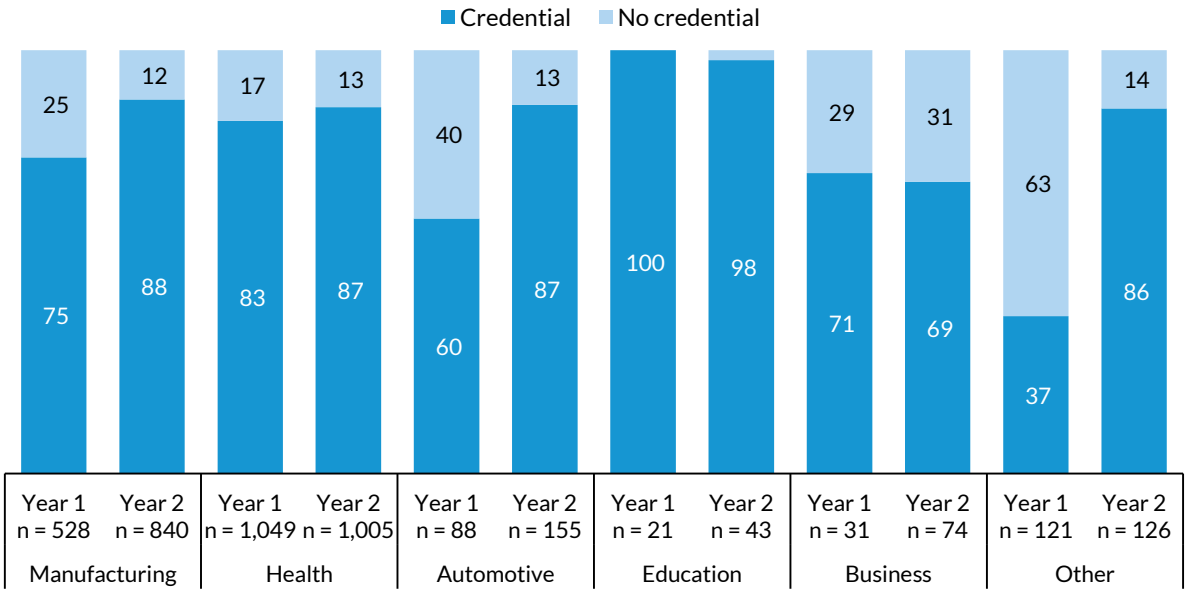
Across occupational areas and years, there was some difference in the prevalence of students with high school credentials (

figure 11). In the first year, automotive and business pathways had a higher proportion of students who did not have high school credentials. By the second year, the proportion of students with high school credentials in automotive was comparable to the other occupational areas, but business remained an outlier.

FIGURE 11

Student High School Credential Attainment at Enrollment by Pathway Occupational Area and Implementation Year

Percent (%) of AO enrollees



Sources: Year 1 and Year 2 AO college surveys.

RECEIPT OF PELL GRANTS

While the vast majority of students had high school credentials, which meets the eligibility requirements for Pell grants, colleges reported that fewer than 40 percent of entering students received Pell grants in either year of AO (figure 12).[8] The highest rate of receipt was in Kentucky, where three-quarters of students entering in the second year received Pell. In the other two states in both years, fewer than half of students were known to receive Pell. In Illinois, Pell receipt fell substantially in the second year to fewer than 10 percent of students for whom Pell status was known. In Louisiana, it grew from 3 percent to 14 percent in the second year, but this rate is still very low. Respondents to the college survey did not know Pell status for a large portion of AO participants; the student-level administrative records will provide another source of information to assess Pell receipt.

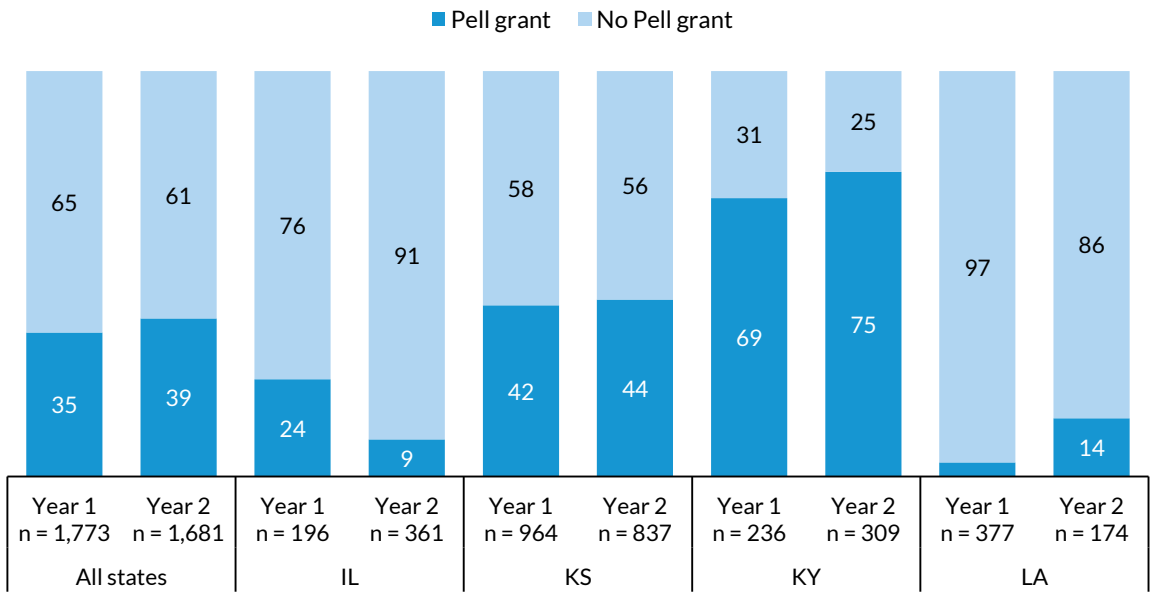
It is puzzling that relatively few students received Pell despite entering AO with secondary school credentials, but the evaluation team has not been able to identify a definitive explanation. Perhaps some students faced eligibility barriers because of immigration status, program type, criminal history, having exhausted their Pell allocation, owing money from prior college attendance, or lack of financial need (though the site visits suggested that financial need would be characteristic of AO students). In

addition, the applications dates for Pell Grants may have been discordant with AO enrollment, or completing the federal financial aid forms (e.g., the FAFSA) may have proved difficult. AO staff in Illinois and Kentucky colleges discussed how students' last-minute enrollment decisions made it difficult to apply for financial aid; this was likely also an issue in other colleges and states given the emphasis on enrolling AO recruits into pathway programs quickly. Students may also have received tuition assistance from other sources, such as workforce funds or tuition waivers. Finally, some short-term programs within AO pathways may have been ineligible for Pell based on the number of instructional hours within a defined period.[11] For example, some certified nurse aid programs are not Pell-eligible, though on site visits, some administrators discussed efforts to reorganize and stack programs to increase credits earned, thereby meeting federal financial aid rules.

FIGURE 12

Student Pell Grant Receipt by State and Implementation Year

Percent (%) of AO enrollees



Sources: Year 1 and Year 2 AO college surveys.

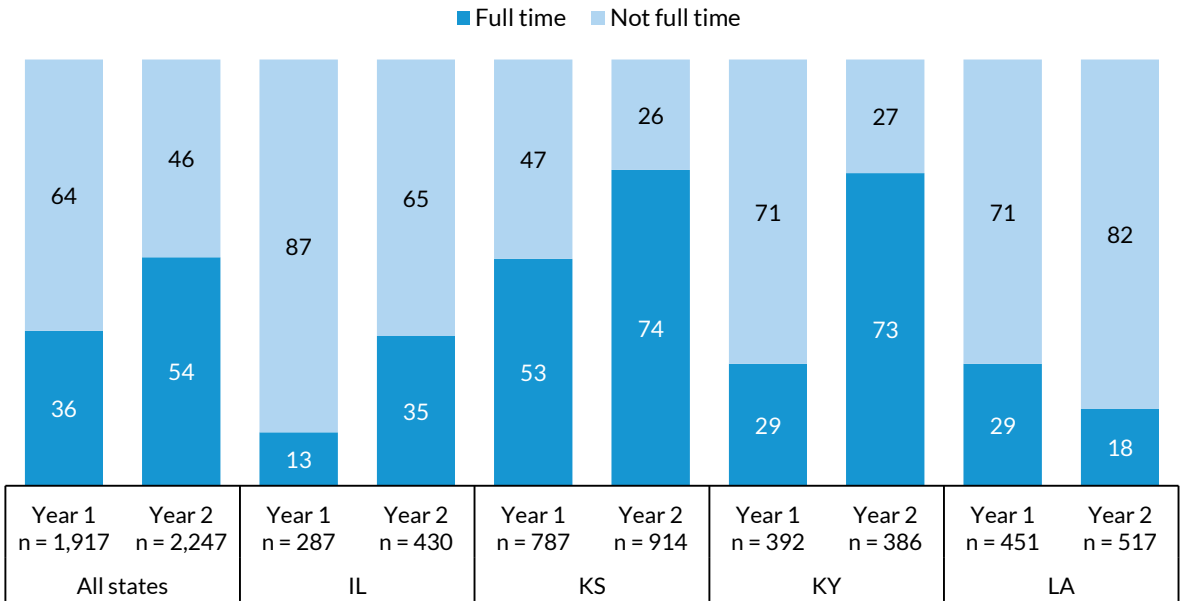
FULL-TIME ENROLLMENT

The proportion of full-time enrollment jumped notably in all states in AO's second year (figure 13). The increase was especially apparent in Kentucky, where full-time enrollment increased from 29 to 73 percent. Also notable was the wide gap between the high levels of full-time enrollment in Kansas and Kentucky and the low levels in Illinois and Louisiana.

FIGURE 13

Full-Time Student Status by State and Implementation Year

Percent (%) of AO enrollees



Sources: Year 1 and Year 2 AO college surveys.

EMPLOYMENT

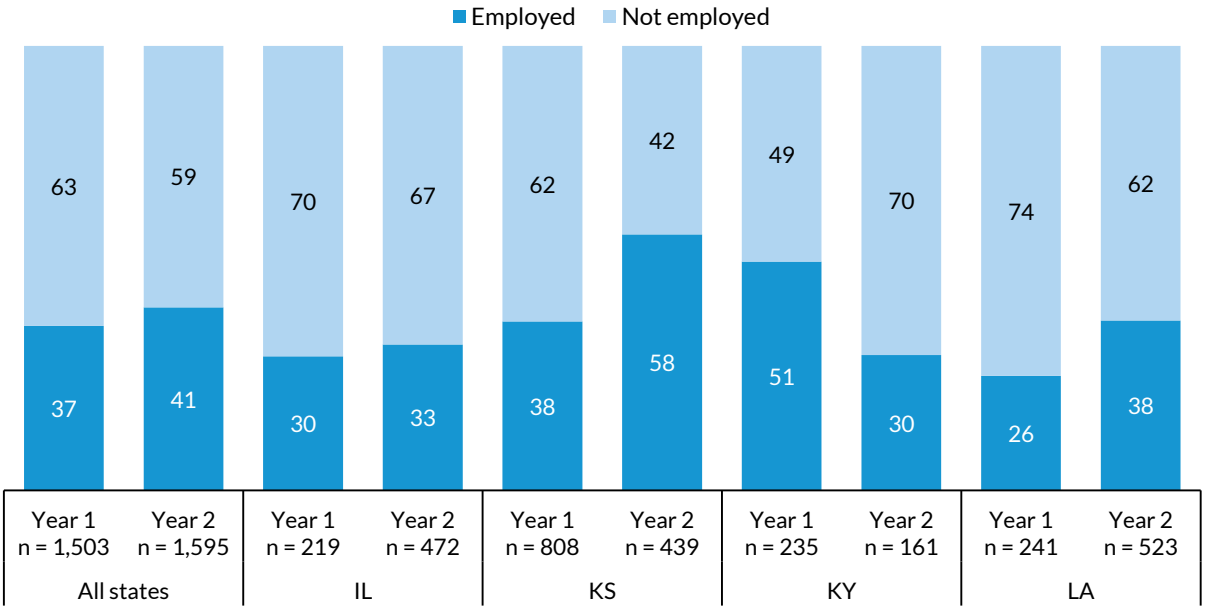
Most AO students were not employed at enrollment, though the share rose somewhat between the first and second years (

figure 14). Again, state and year differences are worth noting. In the second year, only 30–38 percent of AO participants in Illinois, Kentucky, and Louisiana were employed, while in Kansas, the employed share reached nearly 60 percent. Changes between the first and second years might also relate to economic conditions in the states: unemployment rates declined in Kansas and Louisiana between the first and second years of AO but remained stable in Illinois and Kentucky. Nonetheless, there is a good deal of missing data on employment status, particularly in Kansas, so the actual rates of employment may differ somewhat from what is displayed here.

FIGURE 14

Student Employment Status at Enrollment by State and Implementation Year

Percent (%) of AO enrollees



Sources: Year 1 and Year 2 AO college surveys.

Students Were Satisfied with AO

Students in focus groups said AO had been a positive experience for them. Most students noted that they had received assistance with enrolling in AO college classes and that they continued to receive supports while enrolled in classes. They saw the team teacher as an especially valuable support. Participating students were also interested in the AO occupational areas, and a number of students had found employment in their field of study. Others discussed plans to continue studying to achieve higher credentials. Much more information about student experiences can be found in Spaulding and Martin-Caughey (2015), which reports on results of the participant survey fielded in spring 2014.

What Role Did Partners Play in the Second Year to Support AO?

Partnerships are a nonnegotiable element in the AO model, given the expectation that colleges leverage local resources to help students complete integrated pathways and connect to employment opportunities. External partnerships, particularly those with workforce agencies and CBOs, can help colleges recruit AO-eligible students, offer support services, and even help finance student tuition. Other external relationships, such as partnerships with employers, can improve the curriculum or strengthening colleges' job placement capabilities. Finally, partnerships internal to the college are essential for the AO model to thrive. AO introduces new approaches and practices that necessitate stronger collaboration between different college divisions, such as CTE, adult education, and the financial aid office.

By the end of the first implementation year, college partnerships with local employers were mostly nascent. However, most colleges had started developing and expanding partnerships with other organizations, such as local workforce agencies and CBOs. These partners helped recruit and refer students, provided instruction and support services, and connected students to job opportunities. Further, in the first implementation year, most colleges formed internal partnerships between adult education and CTE that facilitated the implementation of AO. All of these partnerships grew and developed further in the second year.

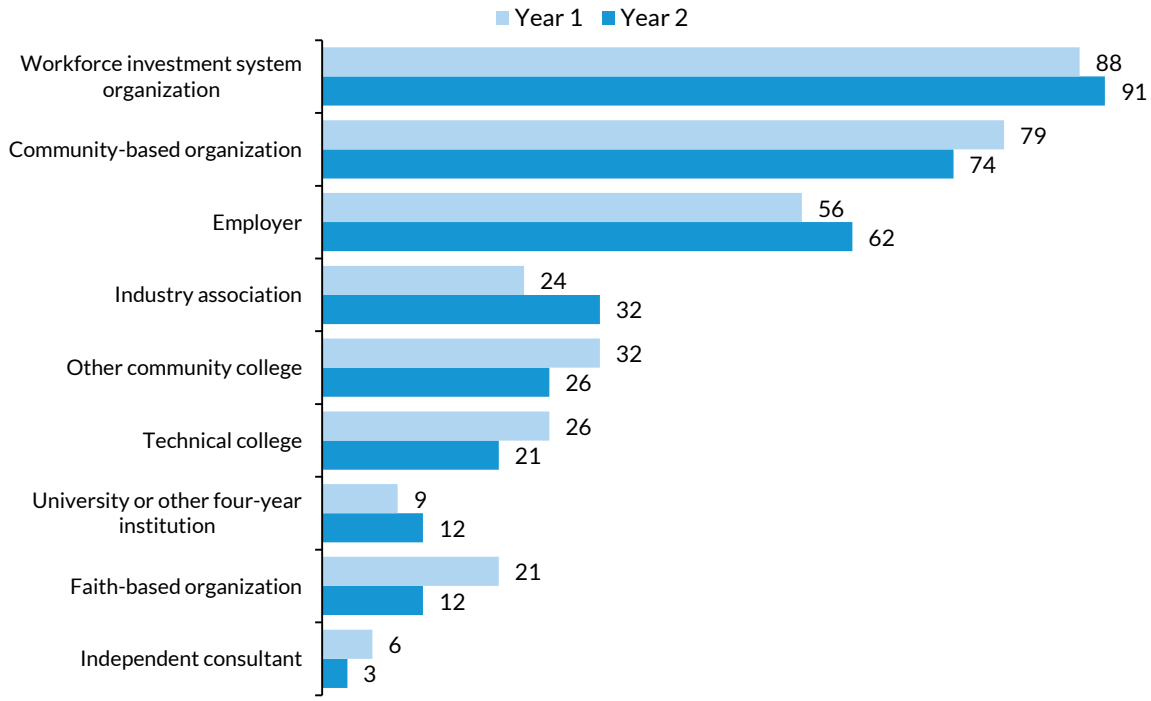
External Partnerships

Across the four states, colleges reported 183 partnerships on the second-year survey; each college had an average of 5.4 external partners. The top external partners for colleges were WIBs, CBOs, and employers in both years of AO (figure 15). Over 9 in 10 colleges reported a workforce system partnership, 3 in 4 reported a partnership with a CBO, over 6 in 10 reported a partnership with an employer, and about 1 in 3 partnered with an industry association. Similar to the first year of implementation, partnerships with another college or university or faith-based organization were less common.

FIGURE 15

External Partnerships Reported by AO Colleges in First Two Years of Implementation

Percent (%) of colleges (n = 34)



Sources: Year 1 and Year 2 AO college surveys.

Across the two implementation years, partnerships changed in various ways. Seven colleges reported new partnerships with employers—four in Louisiana—while five colleges reported that they no longer had partnerships with certain employers in the second year. Meanwhile, partnerships with industry associations increased in the second year. Fewer connections with CBOs were reported in the second year; three colleges did not report CBO partnerships in the second year that did report that type of partnership in the first year, and only one college reported a new CBO partnership. This could relate to different mechanisms of recruitment implemented by colleges in the second year or to the changing nature of the initiative, as AO moved from start-up planning to implementation. In addition, some changes may result from better reporting in the second-year survey, when the survey asked respondents to name partners and their specific roles in addition to which types of partnerships colleges had. Although not listed as a partnership category in the college survey, local K–12 school systems were also key external partners in Louisiana, where they often provided adult education services. In these cases, a strong partnership between the college and the local school system was critical to implement the AO model successfully.

Of the 183 organizations listed as AO partners in the second year, colleges reported that 17 percent were new. Among existing partnerships, over half (52 percent) were stronger in the second year of AO than they had been. Only 5 percent were weaker, and 43 percent experienced no change.

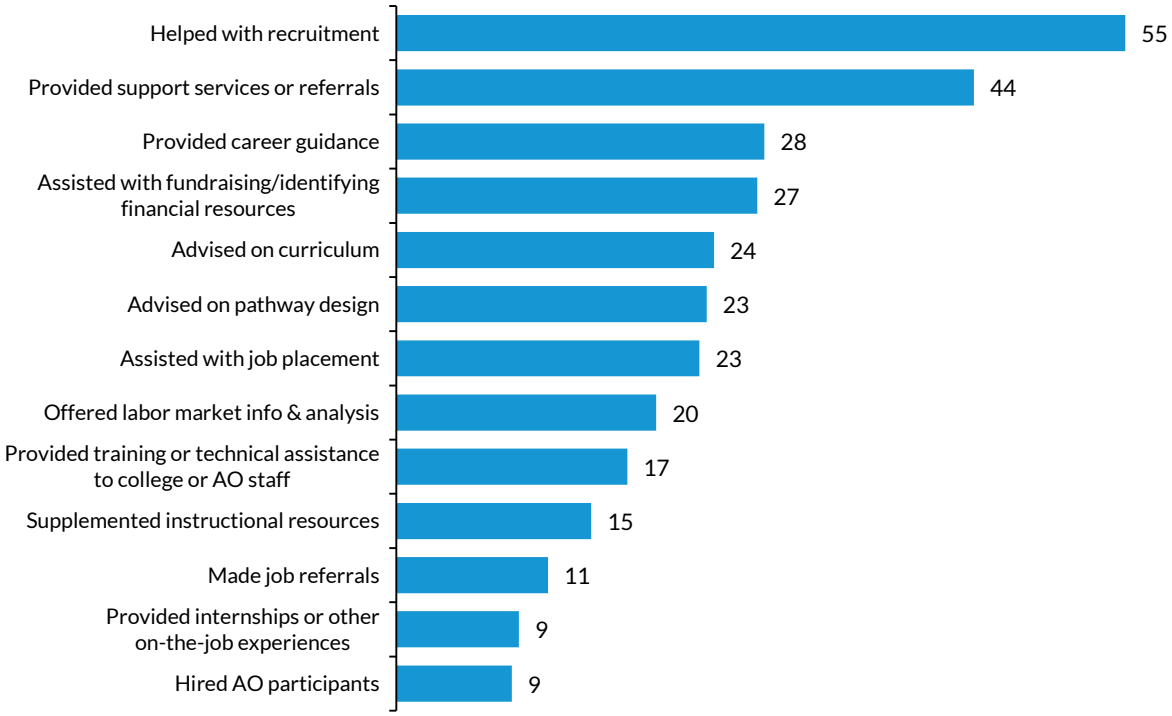
Role of External Partners

The second-year college survey asked respondents to list their partners and identify the role played by each. A partner organization worked with the college on design or implementation of AO, including providing referrals or support services. An organization that only hired AO participants was a pure employer, which is discussed later in this section. Nearly 6 in 10 partners assisted with recruitment, and nearly 5 in 10 provided support services or referrals (figure 16).[10] A number of colleges also noted that partners helped shape pathway design and development and provided career guidance and job placement assistance to AO enrollees.

FIGURE 16

Roles of External Partners in the Second Year of Implementation

Percent (%) of partners (n = 183)



Sources: Year 1 and Year 2 AO college surveys.

Relationships with the Workforce System

According to second-year survey results, all AO colleges in Illinois, Kansas, and Kentucky had partnerships with a workforce system organization, such as a WIB, in both the first and second years of implementation. These types of partnerships were less common in Louisiana. Both state and college staff in Louisiana acknowledged that strong links with these partners had not yet been fully developed in all sites. The second-year site visits revealed variation in the implementation of tuition financing and workforce support policies and procedures across WIBs because WIA funds are locally managed with a great deal of discretion. In colleges where the relationship with the WIB was strong, particularly in colleges where the WIB offered services co-located with the college, collaboration included providing students with career services like résumé workshops, tuition funds through WIA, and a strong referral system between the two institutions. In places where the relationship with the WIB was not as strong, the WIBs had at least a general awareness of AO.

In general, college staff noted in interviews that there was room for improvement in collaboration with local WIBs. They believe WIA can be an important source of funding for students without high school credentials, where local policy permits this type of expenditure. In Kansas, colleges and state workforce agencies reported working with local WIBs to change policies regarding tuition assistance so that students without secondary school credentials could receive assistance with AO tuition. With the recent enactment of WIA reauthorization—the Workforce Innovation and Opportunity Act (WIOA)—integrated pathways by workforce systems could be further emphasized. In Louisiana, the state team is looking toward the 2016 WIOA state plan to determine how all the pathway initiatives statewide will work together. The coordinator at one Louisiana college also noted that the college was starting a strategic planning process related to WIOA.

Employer Engagement

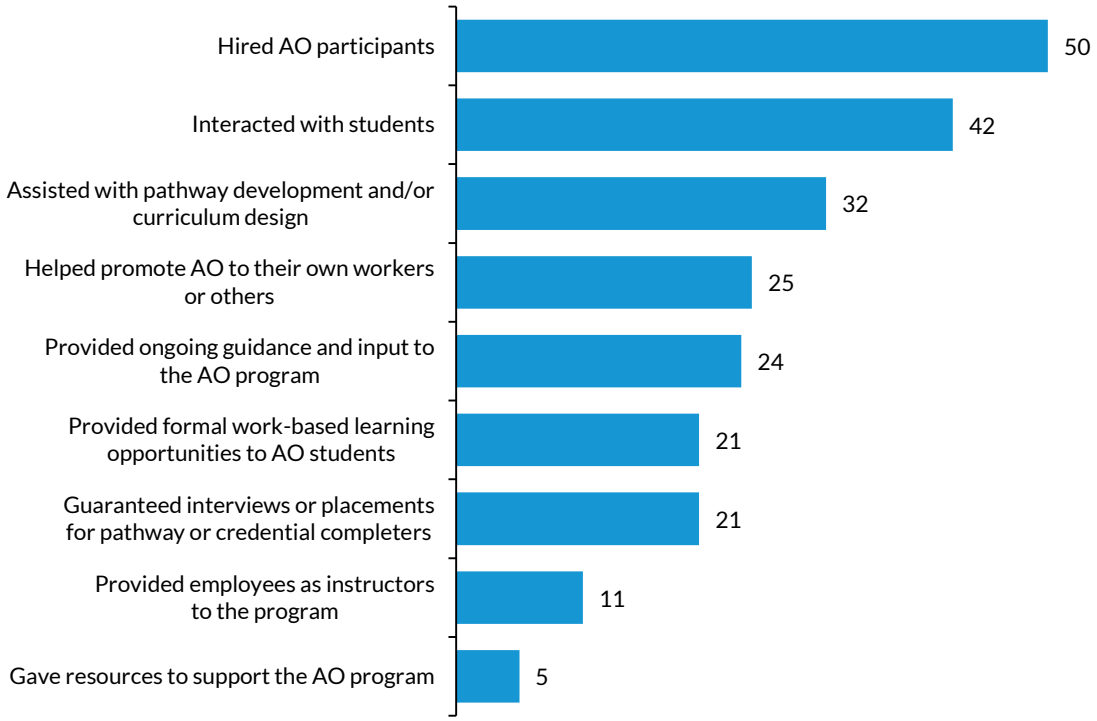
In the second-year college survey, 21 of 34 colleges (62 percent) reported at least one employer partnership. Together, these colleges reported 111 employer partners, averaging 5.3 employer partners for each college that had at least one partner. Some of these employers may also be partners identified in the partnership section, but some are pure employers, meaning that they only hired AO students and did not provide other assistance with AO design or implementation. Therefore, this group of 111 employers may overlap with, but is not a subset of, the 183 partners discussed previously. Figure 17 illustrates how employers engaged with the initiative in the second year of implementation. The top two roles for employers were hiring students (50 percent) and interacting with students by giving

presentations on campus, providing mentors, or allowing for job shadowing (42 percent). Only 21 percent of employer partners provided work-based learning options, such as internships, to AO participants.

FIGURE 17

Employer Activities in the Second Year of Implementation

Percent (%) of employers (n = 111)



Sources: Year 1 and Year 2 AO college surveys.

Site visits provided an opportunity to document employer engagement in some colleges. Students in several focus groups spoke extensively about their opportunities to learn about the industry they were studying from employer guest speakers. Some students also mentioned that their CTE instructors, who often had worked in the industry, had helped them find jobs. Other employers provided equipment and supplies for the classrooms and labs; one employer representative also conducted mock interviews with students and received a commendation from the town mayor for his service to the AO program. However, successful partnerships were not ubiquitous; several college staff in site visits and on the survey indicated that they intended to continue working on employer relationships.

College staff and administrators indicated that they often relied on existing college relationships and systems such as CTE advisory boards to engage employers. These advisory boards comprise local employers, made up of employer representatives from key industry sectors. Members provide input on workforce training needs, curriculum development, and plans for upcoming hiring and layoffs.

Community-Based Organizations

The participation of CBOs continues to be an important component of the initiative. As shown in figure 15 on page 43, 74 percent of colleges reported a partnership with a CBO in the second year of AO. Interviews with AO leadership and staff indicate that the role of CBOs continues to be similar to that reported during the first year: they helped with recruitment and provided wrap-around services such as transportation and child care. The decline in the prevalence of relationships with CBOs might reflect changing recruitment practices. If colleges were focusing more in the second year on recruiting internally from already-enrolled students, then CBOs might be less necessary for outreach. Nonetheless, CBOs can play important roles if colleges intend to reach more students without high school credentials because CBOs may interact with a broader cross-section of adults than colleges do.

In Louisiana and Kansas, some CBOs also provide adult education locally. As such, they are key partners with the AO colleges. In several cases, CBOs in Kansas and Louisiana collaborated with the college on the AO initiative by taking the lead on intake, testing, and placement activities as well as providing the direct adult education instruction for the pathway classes.

Internal Partnerships

During the first year of implementation, engaging various stakeholders within the college proved crucial for the initiative's success. In the first year, 24 of 34 colleges (71 percent) identified bridging "silos" within the college as a challenge. Silos are separations among funding sources or departments within a college (such as adult education and CTE) that result in little interaction or collaboration among staff. All but two of those colleges reported that the issue was somewhat (18 colleges) or fully resolved (four colleges) by the second year. However, an additional four colleges that had not identified silos as an issue in the first year identified this issue as a new challenge in the second year.

Despite the difficulties in bridging these silos, findings from the implementation research suggest that internal partnerships continued to contribute to the initiative's success in the second year. In

general, AO staff throughout the initiative reported strengthening the relationship between the CTE and adult education departments. Also, many college staff and administrators spoke about increased awareness throughout the college of the needs of adult education students. In addition to increased collaboration between CTE and adult education, interviewees emphasized the importance of strengthening the relationship with the admissions and financial aid offices. For example, having an engaged contact in the financial aid office often made it easier to help students identify possible resources for tuition, especially those without high school diplomas who did not qualify for Pell Grants.

The site visits also revealed that having a broad range of internal partnerships in place was integral for colleges' plans to sustain and scale AO programming. For example, one Illinois college created a student success team composed of administrators and staff across the campus, including the vice president of academic affairs, the vice president of student services, the vice president of enrollment services, deans from the college departments, the director of academic advising, and institutional research staff. Each month the team met to discuss how their divisions could contribute to the college's overall strategic goal of improving how students were served. A Louisiana college implemented a similar structure under the leadership of the vice chancellor of academic affairs. The college AO team worked hard to infuse the project's goals into these conversations. These teams may help sustain the partnerships fostered by the initiative.

The site visits indicated that most CTE instructors became strong supporters of the AO model by the end of the second year, despite early reservations. As they gained more experience with the approach, many initially skeptical instructors began to see the value of having a second instructor in the classroom. In some colleges, the AO team teaching experience also appeared to raise general awareness of the adult education program and its students, and to increase engagement and improve the relationship between the adult education and CTE programs. In some cases, the CTE departments began to see AO students as a new pipeline of students who could boost enrollment numbers.

What Resources Did Colleges Use to Implement AO?

Throughout the AO initiative, states and colleges have invested substantial resources to make CTE programming available to students with low basic skills so they can more quickly enter and complete career-oriented education and move into higher-paid employment. So far, these resources have been mostly in the form of staff time for instruction, counseling, coordination, advocacy, and management. One goal of the evaluation is to try to capture these investments and monetize them, when possible, to estimate the dollar value of the resources states and colleges invest in AO.

This section summarizes the value of incremental resources used by the colleges to implement AO—that is, the *extra* resources used beyond what the colleges would have invested if AO did not exist. Later reports, including the cost-benefit analysis slated for 2016, after the end of the three-year grant period, will report on state costs as well and will assess the benefits of the initiative to determine if those benefits outweigh the costs.

This section presents data derived from college self-reports of resources directed to AO that otherwise would not have been spent in the absence of AO or would have been spent on other activities valuable to the college. The colleges included in these tabulations are the 31 reporting data on resources used in both the first and second year. Three colleges that were active in both years of AO were missing data on resources in one of the two years, two in Kansas and one in Kentucky.

In general, colleges found it challenging to parse out the resources used for AO relative to their regular programming in the survey. No college tracked every hour spent on AO-related activities, and in some cases it was difficult to determine which classes would have existed in the absence of AO and which would not. To obtain the most accurate data possible, the evaluation team personally followed up with every college AO coordinator to verify that the resources reported in the survey represented their best informed estimates.

Framework for Capturing Resources Used by Colleges for AO

This report explores the economic value of the resources used by the colleges to continue to implement and expand AO. The economic costs, or real resources used, do not necessarily represent money directly expended. That is, most colleges did not write a check for the entire amount of the resources used. Colleges redirected some portion of the resources captured in this analysis from other potential uses. This report accounts for redirected resources because they were "used up" by AO when they could have gone toward other activities that were of value to the college. For example, a dean who the college would have employed anyway may have spent 20 percent of her time on AO activities. While this does not necessarily cost the college more money, the college invested the value of that 20 percent of the dean's time into AO when that time could have gone toward other activities, such as departmental oversight. Therefore, that dean's time is a resource used on AO.

The real resources used include the time allocated to AO by administrators, instructors, counselors, and other personnel; supplies; space; advertising; and supports. Added resources used for AO are those required and used to run the AO model over the alternative approach. In general, the alternative to AO will be adult education programming, although in some colleges it may be CTE programs. The total number of added resources is less any savings in resources from AO (classes not given, for example).

The estimates account only for the resources used by the colleges and thus do not include costs to the students (such as forgone earnings or tuition) and to the state and federal government, which will be incorporated into the cost-benefit analysis. Because of data limitations, the evaluation will be unable to account for the costs and benefits to other organizations, such as CBOs, that may have helped implement AO.

Total Resources Used by Colleges

The AO college surveys prompted the colleges to report personnel costs, non-personnel course costs, support costs, and other expenditures. Using these data, it is possible to estimate the colleges' total investment in AO. These totals represent the value of resources used for AO-specific activities. Some of these may be in addition to regular college operations, and some may have supplanted other activities that the college would have undertaken in the absence of AO. Table 5 summarizes these estimates for each year by state.

TABLE 5

Value of Resources Used for AO in the First Two Years of Implementation

	Total		Average (mean) per college		Median per college	
	Year 1	Year 2	Year 1	Year 2	Year 1	Year 2
All states (*n* = 31)	**$7,348,441**	**$6,346,982**	**$237,046**	**$204,741**	**$232,088**	**$191,000**
Illinois (*n* = 8)	$2,136,576	$1,698,632	$267,072	$212,329	$271,782	$206,359
Kansas (*n* = 7)	$1,993,197	$1,615,865	$284,742	$230,838	$245,956	$252,400
Kentucky (*n* = 7)	$1,649,390	$1,354,759	$235,627	$193,537	$242,054	$191,000
Louisiana (*n* = 9)	$1,569,278	$1,677,726	$174,364	$186,414	$135,000	$140,460

Sources: Year 1 and Year 2 AO college surveys.
Notes: The first semester was fall 2012 in Louisiana and spring 2012 in the other states. Year 1 refers to the first three semesters in each state, and year 2 refers to the second three semesters. The summer is its own semester.

The value of the resources used for AO declined between the first and second years. The only state that increased the overall resources used was Louisiana, where a few colleges substantially increased the amount of personnel time dedicated to the effort. The most striking shift between the first two years of the initiative, as shown in table 5, appears in the college averages and medians. From the first to the second year, the average value of resources used per college declined 14 percent across the states. The median declined further, by 18 percent. This indicates that the colleges were serving more students with fewer resources as they settled into the second year of the initiative. The median value of resources used per college in the second year ranged from about $140,000 in Louisiana to about $252,000 in Kansas. Kansas colleges saw a slight increase in the median value of resources used in the second year, but totals and averages declined, even as the program grew.

Declines in Unit Costs

It is not unusual for organizations implementing new programs to economize on resources used in the second year. In putting a new program into place, organizations often experience one-time start-up costs. These costs accrue when organizations put resources into planning for implementation, intensive initial professional development and technical assistance, concentrated recruitment efforts, and other start-up activities. Of course, organizations also invest resources into ongoing program development, particularly in the first few years of rollout. However, often resource needs are highest and program outputs (e.g., credits and credentials) are lower in the first year. Over time, unit costs (i.e., costs per credential or credit) often decrease.

Table 6 displays the value of resources used per credit and credential earned and per pathway and pathway-semester offered. The pathway-semester is the number of semesters that a pathway was offered, since some pathways took place for only a portion of the grant year. This provides an estimate of the average amount of resources dedicated to running an AO pathway each semester. The table also shows the change in per-unit resources used.

TABLE 6

Value of Resources per Credit, Credential, and Pathway

For colleges with cost data in both AO implementation years

	All states *n* = 31	Illinois *n* = 8	Kansas *n* = 7	Kentucky *n* = 7	Louisiana *n* = 9
Resources per credit					
Year 1	$636	$506	$537	$830	$963
Year 2	$331	$392	$161	$632	$637
Change (Y2-Y1)	-$305	-$115	-$376	-$197	-$326
% change ([Y2-Y1]/Y1)	-48%	-23%	-70%	-24%	-34%
Resources per credential					
Year 1	$3,022	$3,677	$1,886	$3,881	$4,253
Year 2	$1,849	$2,353	$1,203	$2,144	$2,280
Change (Y2-Y1)	-$1,173	-$1,325	-$683	-$1,737	-$1,973
% change ([Y2-Y1]/Y1)	-39%	-36%	-36%	-45%	-46%
Resources per pathway					
Year 1	$89,615	$112,451	$90,600	$82,470	$74,728
Year 2	$65,433	$73,854	$55,719	$64,512	$69,905
Change (Y2-Y1)	-$24,182	-$38,598	-$34,880	-$17,957	-$4,822
% change ([Y2-Y1]/Y1)	-27%	-34%	-38%	-22%	-6%
Resources per pathway-semester					
Year 1	$44,808	$57,745	$42,408	$43,405	$37,364
Year 2	$30,368	$32,666	$25,248	$31,506	$33,555
Change (Y2-Y1)	-$14,439	-$25,079	-$17,161	-$11,899	-$3,809
% change ([Y2-Y1]/Y1)	-32%	-43%	-40%	-27%	-10%

Sources: Year 1 and Year 2 AO college surveys.
Notes: The first semester was fall 2012 in Louisiana and spring 2012 in the other states. Year 1 refers to the first three semesters in each state, and year 2 refers to the second three semesters. The summer is its own semester.

The per-unit incremental resources used declined sharply between the first and second years. The likely reasons are the substantial resources invested in start-up in the first year and the efficiency gains in the second year resulting from increasing number of students and pathways within colleges. The value of incremental resources for AO averaged $636 per credit in the first year, but only $331 per credit in the second year, a decrease of 48 percent. The resources per credential declined 39 percent,

from $3,022 to $1,849 by the second year. Finally, the resources invested per AO pathway semester declined by 32 percent from $44,808 to $30,368.

In terms of percentages, Kansas realized the largest savings in per-credit resources used; between the first and second years, the level of college resources invested per credit declined 70 percent. Across all measures, Kansas's unit costs in the second year were the lowest. One possible explanation is the state's recruitment strategy, which focused on bringing CTE students into AO. The recruitment strategy was probably less expensive because AO staff members could reach out to students already enrolled in classes. These students may be less costly to serve, both in demands for services and in staff time, and they may be more likely to earn credits and credentials faster than students who are less familiar with the college setting.

In addition, the data exhibit some economies of scale. AO credits are highest and resource costs per credit are lowest in Kansas. AO participation increased in the second year and resource costs per credit declined. These results are what one would expect, given the initial fixed costs of AO.

Resource Components

Table 7 describes the components of resources used for AO by colleges across both years of the initiative. Personnel investment represented over 90 percent of resources used in almost every state and year. The economic value of staff time is assumed to be the annual salary plus benefits of each worker times the portion of time devoted to AO.[11]

Resources not used for personnel were devoted to non-personnel course expenses (which include supplies, space, learning tools and technology, and other course-related expenditures), support services beyond the value of the coach or navigator's time (such as bus passes and emergency assistance funds specifically for AO students), advertising, and consultants. College occasionally brought on consultants from other organizations or institutions to assist with various aspects of developing or implementing a complex initiative like AO.

One notable shift between the first and second years is the lower proportion of resources devoted to course costs and support services in Illinois colleges. While the evaluation team attempted to measure resources consistently, some shifts may represent different approaches to estimating resources by each college across the two years. This shift brought Illinois's investment in these areas

more in line with the other states. Illinois colleges continued, however, to spend a larger portion of resources than the other states on advertising.

TABLE 7

Components of Resources Used in the First Two Years of AO Implementation (%)

	Personnel[a]		Non-personnel course expenses[b]		Non-personnel support services[c]		Advertising		Consultants		Other	
	Yr 1	Yr 2	Yr 1	Yr 2	Yr 1	Yr 2	Yr 1	Yr 2	Yr 1	Yr 2	Yr 1	Yr 2
All states (*n* = 31)	**93.3**	**96.0**	**5.0**	**2.6**	**0.4**	**0.2**	**0.9**	**0.6**	**0.1**	**0.1**	**0.3**	**0.5**
Illinois (*n* = 8)	85.6	94.7	11.0	3.6	1.5	0.1	1.3	1.6	0.0	0.0	0.6	0.0
Kansas (*n* = 7)	95.3	92.8	3.2	6.6	0.0	0.0	1.0	0.2	0.2	0.0	0.3	0.5
Kentucky (*n* = 7)	96.3	96.9	3.3	2.3	0.0	0.7	0.4	0.1	0.0	0.0	0.0	0.0
Louisiana (*n* = 9)	98.2	99.7	1.2	-2.0	0.0	0.0	0.7	0.4	0.0	0.3	0.0	1.6

Sources: Year 1 and Year 2 AO college surveys.

Notes: The first semester was fall 2012 in Louisiana and spring 2012 in the other states. Year 1 refers to the first three semesters in each state, and year 2 refers to the second three semesters. The summer is its own semester.

[a] In measuring personnel resources used, the survey asked about the proportion of staff members' time dedicated to AO in the first year and the total value of their time for the whole year, including the value of benefits. The evaluators multiplied the total proportion of time for each category of staff member by the annual value of the time for that category.

[b] To measure resources directed to courses, the evaluators considered three types of classes: entirely new classes added for AO, existing classes that had AO added to them ("enhanced" classes), and classes that the college did not offer because of AO but would have offered otherwise. Classes that colleges did not offer represent a saving. For each class no longer offered, colleges were asked about the cost the last time it was offered. For each added class, colleges were asked for the total cost of the class. For each enhanced class, they were asked the incremental costs attributable to AO. For added and enhanced classes, colleges were also asked about the proportion of costs that could be attributed to instructors, supplies, space, and "other." Because personnel costs are captured separately, the costs of the instructors were then backed out of the course costs. Space costs and "other" costs were negligible. Supply costs were counted once (not every semester the course was offered) because in follow-up verification, colleges confirmed that most supply expenditures were fixed capital costs, such as purchasing class textbooks or a piece of machinery, and therefore they would not recur across semesters.

[c] Support service resources here do not include the salary of the coach or navigator, which is part of personnel resources. Support services include transportation vouchers, emergency financial assistance, and child care assistance. They do not include tuition waivers or scholarships.

Meanwhile, Kansas colleges reduced their investment in advertising in the second year. Kentucky also reduced investment in course costs and advertising, but it increased investment in support services. Louisiana actually experienced a savings in non-personnel course resources because colleges were able not to offer several course sections, particularly in developmental education, because of AO. Also, only Louisiana colleges spent resources on consultants in the second year.

Personnel

The personnel category includes time spent on AO by deans/administrators; regular (non-adjunct) CTE faculty members/instructors; adjunct CTE faculty members/instructors; adult education instructors; counselors/coaches/navigators/advisors; marketing/outreach/recruiting staff; administrative support staff (e.g., clerical); data staff; physical plant/maintenance staff; and other staff. This is time spent on all AO-related activities, including attending training, completing grant reporting requirements, and other aspects of the national initiative.

In the second year, the relative proportion of time invested by deans and administrators decreased, and the proportion of time spent by teaching staff increased (table 8). This trend may reflect the reduced time spent in the second year on curriculum development and alignment, building partnerships within the college, negotiating with state leadership, and other leadership activities and the increased time spent teaching students and running the program. The shift in these percentages across the types of personnel indicates that the colleges have transitioned from their start-up activities to regular operations. This shift was expected as AO became more established and embedded within the colleges' routines.

TABLE 8

Personnel Resources Used in the First Two Years of AO Implementation (%)

	Deans/ Adminis-trators		Non-adjunct CTE faculty members/ instructors		Adjunct CTE faculty members/ instructors		Adult ed. instructors		Counselors/ coaches/ navigators/ advisors		Other staff[a]	
	Yr 1	Yr 2	Yr 1	Yr 2	Yr 1	Yr 2	Yr 1	Yr 2	Yr 1	Yr 2	Yr 1	Yr 2
All states (*n* = 31)	**24.5**	**16.3**	**19.5**	**23.0**	**7.1**	**12.3**	**23.2**	**20.6**	**17.5**	**15.5**	**8.4**	**12.2**
Illinois (*n* = 8)	26.4	18.0	23.4	12.2	4.2	15.6	27.7	23.0	16.0	25.0	2.2	6.3
Kansas (*n* = 7)	19.1	15.4	21.1	35.3	8.3	4.9	23.8	21.3	16.5	13.8	11.3	9.5
Kentucky (*n* = 7)	24.6	17.0	17.2	32.7	6.8	5.4	22.6	8.8	15.7	13.3	13.1	22.8
Louisiana (*n* = 9)	28.6	15.1	15.2	14.9	9.2	21.3	17.6	27.0	22.2	9.6	7.1	12.1

Sources: Year 1 and Year 2 AO college surveys.
Notes: The first semester was fall 2012 in Louisiana and spring 2012 in the other states. Year 1 refers to the first three semesters in each state, and year 2 refers to the second three semesters. The summer is its own semester.
[a] "Other staff" includes marketing/outreach/recruiting staff, administrative support staff (such as clerical staff), data staff, physical plant/maintenance staff, and others.

Just over half of labor resources expended on AO went toward instructors. The shift between the first and second years involved fewer resources expended on adult education instructors and more on regular college faculty in all states except Louisiana. This shift might reflect colleges in most states

modifying team teaching approaches in order to use adult education resources more efficiently. The increase in the proportion of adult education time in Louisiana might reflect colleges moving counseling and navigation responsibilities from dedicated personnel to adult education instructors, though this was not observed in the site visits. One other notable and pronounced shift was from regular (non-adjunct) CTE faculty to adjunct CTE faculty in Illinois and Louisiana.

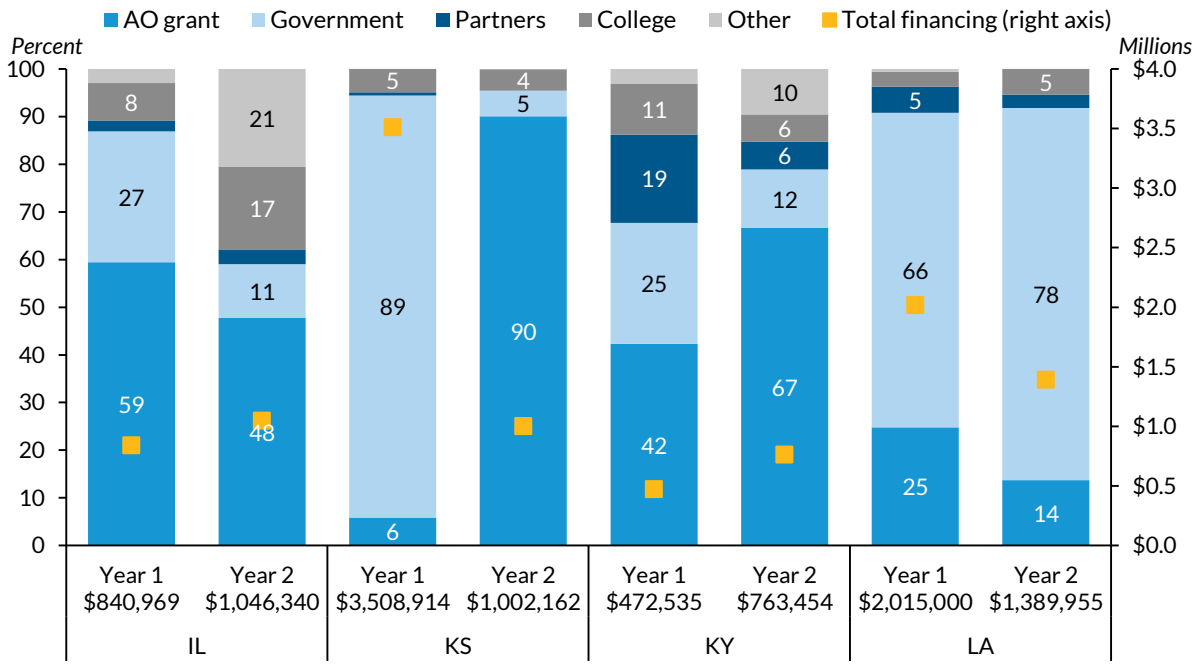
Financing

For the most part, the colleges did not rely on their own institutional capital to pay for AO. Rather, as discussed further in the sustainability section (starting on page 66), colleges braided funding from various sources.

Figure 18 displays the sources of financing for AO by state and year and implementation, as reported on the college survey. The stacked bars show the proportion of financing from various sources, while the yellow squares represent the total amount of financing, plotted on the right axis. The yellow squares correspond with the totals listed next to each year on the horizontal axis. These figures represent resources *received* in each year, though the expenditure of these resources may span several years.

FIGURE 18

Financing Sources for AO by State and Implementation Year



Sources: Year 1 and Year 2 AO college surveys.
Notes: The first semester fall 2012 in Louisiana and spring 2012 in the other states. Year 1 refers to the first three semesters in each state, and year 2 refers to the second three semesters. The summer is its own semester.

Overall, the AO grant and the government (federal and state) are the primary financing sources. The very large proportion of government financing in Kansas in the first year is the result of a large TAACCCT grant received by one college. In the second year, Kansas financing came primarily from the AO grant. The other three states had a more diverse mix of financing sources, including substantial contributions by partner organizations in Kentucky. Financing in Illinois and Kentucky increased in the second year. It decreased in Kansas, primarily because the receipt of the large TAACCCT grant in the first year was not matched in the second year. Louisiana colleges received large investments from the state government from WIA rapid response funds, and six of the nine AO colleges received large TAACCCT grants from the federal government.

How Did the States Support Colleges' Implementation of AO?

The AO state teams continued to support the colleges in various ways throughout the second year of implementation. State teams focused primarily on leveraging and strengthening structures and relationships that were created in the first year. Across states, the two most widely used vehicles to support the colleges' implementation of AO were (1) partnerships among state agencies and (2) the provision of technical assistance and professional development. Further, all four state teams were strategic about planning and executing policy and systems change to help sustain AO work beyond the end of grant funding.

Partnerships among State Agencies and Colleges

State AO teams remained committed to supporting colleges as they implemented the initiative. The AO states used the systems created during the first year to communicate regularly with colleges and, as a result, developed an in-depth understanding of colleges' progress and their ongoing needs. For instance, the Illinois state team visited the colleges regularly to provide individualized feedback and support. Illinois also continued to work with a consultant, a retired community college dean, who interfaced with the colleges regularly. Kansas AO state team members described long-standing monthly calls, frequent site visits to colleges, and participation in key decisionmaking, such as pathway selection. In Kentucky, the state team continued to have regular engagement with the local AO executive teams through calls and the distribution of a monthly newsletter to highlight initiative accomplishments across the state. The Louisiana state team conducted monthly group check-in calls with all the colleges, and plans were moving forward to implement regular one-one-one calls with members of the implementation team from each college.

In addition to steady communication with the colleges, stakeholders noted that engaging and partnering with other state-level agencies remained an important mechanism for galvanizing state support for AO. The Kentucky Community and Technical College System (KCTCS) partnership with Kentucky Adult Education (KYAE) and the Kentucky Education and Workforce Development Cabinet (KEWDC) has been crucial in moving the project forward and getting buy-in from state policymakers and other state agencies.

In Kansas, the director of workforce training and education, a position shared between the Kansas Board of Regents (KBOR) and the Department of Commerce, has played a key role in increasing collaboration between the two agencies and ensuring that AO is part of the state's plan for economic development. Kansas also worked with the state Department for Children and Families (DCF) to leverage TANF resources for AO student tuition.

Illinois started re-engaging the Department of Commerce, which was involved during the design phase but had to withdraw during initial implementation because of state funding cuts. The Illinois Community College Board (ICCB) worked on strengthening the partnership between adult education and CTE at the state and local levels. The senior director of CTE officially joined the project in 2013 and has helped engage CTE divisions in participating colleges around the use of integrated pathways.

Meanwhile, the Louisiana Community and Technical College System (LCTCS) has maintained its close relationship with the Louisiana Workforce Commission and successfully negotiated sharing WIA funds between the two agencies to promote adult education career pathways, specifically AO.

Technical Assistance and Professional Development

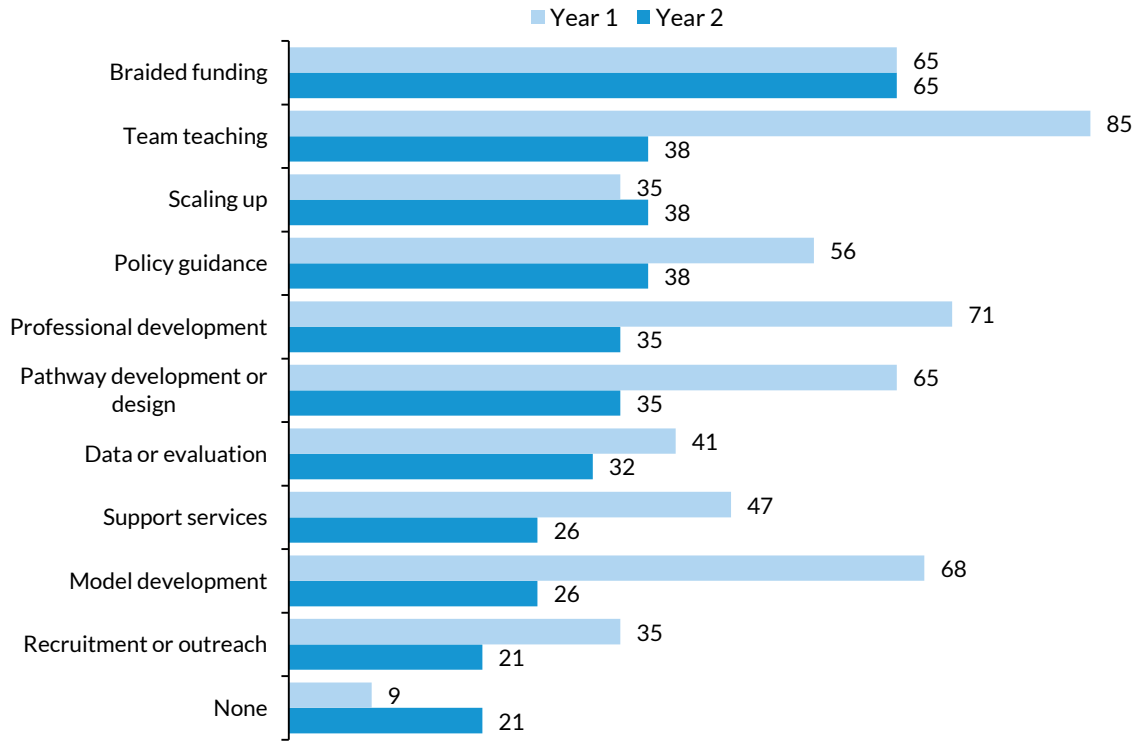
During the second year of AO implementation, all state offices helped colleges reevaluate their pathway selections and structures, to link pathways to state and regional labor market information more effectively. Moreover, colleges throughout the initiative have relied on technical assistance and professional development—provided by state offices and by JFF and its partners—to improve how they serve students through integrated pathways. The vast majority of colleges reported receiving technical assistance: 91 percent in the first year and 79 percent in the second year. Figure 19 shows the most common topics for technical assistance received by the colleges, based on the second-year survey.

According to survey results, colleges generally found the technical assistance helpful, particularly assistance with team teaching. Colleges did comment that some technical assistance was heavily oriented toward the adult education staff and instructors and that it would have been useful to engage the technical staff and faculty more. Satisfaction with all types of technical assistance increased from 80 percent identified as very or somewhat helpful in the first year to 89 percent in the second year. By the second year, only 18 percent of colleges across the states identified receiving sufficient technical assistance as a challenge in program implementation. Coincidentally, 18 percent of colleges—but not all the same colleges—identified receiving sufficient professional development as a challenge in the second year.

FIGURE 19

Top Technical Assistance Topics Received by the Colleges

Percent (%) of colleges



Sources: Year 1 and Year 2 AO college surveys.
Notes: The first semester was fall 2012 in Louisiana and spring 2012 in the other states. Year 1 refers to the first three semesters in each state, and year 2 refers the second three semesters. The summer is its own semester.

The states' efforts to provide technical assistance and professional development were notable during the site visits. For instance, Illinois developed a robust system of professional development and technical assistance for those interested in implementing integrated pathways or in facilitating the transition of adult education students into college. At the time of the site visits, Kansas was working with an I-BEST leader from the State Board of Community and Technical Colleges in Washington State to develop a "train the trainer" module to better accommodate the training needs of new instructors assigned to AO across the state. Kentucky colleges benefitted from a statewide coordinator who has maintained contact with colleges, gauged their needs, and connected them to the resources they need to implement AO. Louisiana began creating online training modules for adult education providers and instructors that would provide guidance on structuring integrated career pathways. State administrators expressed that LCTCS would eventually roll out these new trainings throughout the state.

Policy Work and Systems Change

States that have been involved in the AO initiative aim to fundamentally reform how students with basic skill needs access postsecondary opportunities. Thus, policy and systems change has remained an important goal. During the design phase and first implementation year, states charted out various policy goals that would contribute to a state policy environment more conducive to meeting the needs of adult education students. Policy goals for each state can generally be grouped into three categories: curricular alignment, data improvement, and new funding models.

Table 9 portrays the three different categories and progress made by each state team. The next three sections provide more details on each category. They include observations on AO states' activities and note progress in policy and systems change to help move the initiative forward.

Curricular Alignment

AO came at a time when some states were already undertaking curricular alignment efforts. Curricular alignment refers to the process of ensuring that academic programs are consistent across the state. In many cases, these states built on existing efforts to ensure that the curricular standards did not conflict with the structures and practices introduced by AO, such as integrated instruction.

When AO began, Illinois was moving the state from a literacy-based model for adult education to a career pathways-oriented structure; it had been providing adult education programs with tools and professional development to improve their strategies to transition adult education students into postsecondary programs. Kansas was undergoing a statewide alignment effort for technical programs to identify value-added exit points within programs, promote industry-recognized credentials, identify bridge courses, and make program length consistent. This effort facilitated Kansas's identification of AO career pathways. Kentucky already had course alignment but was reassessing curricula to make them more consistent with the standard introduced by the federal Common Core.

TABLE 9

State Progress on Policy Levers in the Second Year of Implementation

	Curricular Alignment		New Funding Models		Data Improvement	
	Year 1	Year 2	Year 1	Year 2	Year 1	Year 2
Illinois	Adult education professional development tools for integrated career pathways	Inclusion of CTE staff in professional development related to integrated career pathways	Performance-based funding; deadline changes; combining efforts with other grant initiatives	Accessing Perkins funds for AO tuition	P-20 (existing)	Improved alignment among systems
Kansas	Statewide technical program alignment	Allowing CASAS as college entrance	Tiered funding	DCF financing for TANF-eligible students		
Kentucky	Aligning curriculum to Common Core	Allowing TABE as college entrance		Combining efforts with other grant initiatives	P-20 (existing)	Improved P-20
Louisiana	WorkReady U development; common course numbering and transfer degrees; waiving placement testing	Introducing HiSet in place of GED; new professional development model	Tuition waivers; combining efforts with other grant initiatives	WIA rapid response and incentive funds; JP Morgan investment; Workforce and Innovation for a Stronger Economy fund	Moving into BANNER, expansion of P-20	Implementing new adult education data system

Sources: Site visits and program documents.

Louisiana was creating its WorkReady U structure, the new term for adult education within the LCTCS system, which focused on moving those without high school credentials into career pathways. Part of the WorkReady U effort was realignment of institutions, and many community and technical colleges throughout the state were merging just as AO was getting off the ground. Louisiana was also undertaking a common course number project and implementing transfer degrees so students from community and technical colleges in the state could easily transfer to four-year public institutions. Further, the Louisiana state office began a pilot in the first year to allow colleges to enroll adult education students in CTE courses without taking a college placement test, such as the Computer-Adaptive Placement Assessment and Support System (COMPASS).

One key aspect of curricular alignment in the second year was improving GED preparation, especially after the new test rolled out in early 2014. This new GED exam aligns with the Common Core

academic standards, is administered on the computer, and is more expensive to take, causing concern among adult education providers about students' low digital literacy skills and their ability to afford the test fees. States and colleges worked with adult education instructors to improve basic skills instruction in order to prepare students for this new test. In response to the test change, Louisiana adopted the HiSet in the second year of AO as the official state high school equivalency exam, which also resulted in new training for instructors and revised preparation for adult education students.

In the second year, states also encouraged colleges to explore changing their assessment policies in ways that are more specific and aligned to the needs of students with basic skill deficiencies. Twenty-one percent of the colleges in the second-year survey noted that they had implemented such changes. At a state level, KCTCS in Kentucky now allowed colleges to use the TABE—an adult education exam—as an assessment exam for incoming AO students instead of the COMPASS—a college admission exam. Some colleges in Kansas and Louisiana waived the COMPASS requirement to allow students to enroll in the college with their CASAS or TABE scores. (CASAS is another adult education exam, an alternative to the TABE.)

States also integrated curricular alignment into professional development in the second year. Illinois made a greater effort to include CTE instructors in professional development opportunities related to integrated career pathways. The state initially targeted these trainings toward adult education providers. The Louisiana state team began to develop a centralized professional development curriculum to train adult education providers in the AO model. As part of this effort, state leadership developed a "triangular teaching model" with three critical components, including technical training and skills; foundational academic skills; and personal, life, and transition skills.

New Funding Models

Exploring funding models to finance and sustain AO was perhaps the biggest priority for all states during the second year. At the end of the first implementation year, state-level stakeholders identified the financing of integrated pathways and the availability of tuition for students without high school credentials as the biggest barriers to implementing and sustaining AO. In response to this finding, JFF worked with state teams to create a braided funding toolkit in order to determine how to repurpose funds most efficiently and change policies in order to create or strengthen existing funding models that supported implementation of integrated pathways.

ICCB in Illinois braided funding streams when they determined that Perkins funds could be used for AO; these were previously mostly used by the K–12 system. This was an important victory for ICCB because it provides a funding stream dedicated to scaling up AO to other Illinois colleges.

KBOR in Kansas tapped into DCF resources to fund tuition for AO students receiving (or eligible for) TANF. KBOR and DCF signed an agreement to make this arrangement possible and have worked with the colleges to determine the best way for colleges to access these funds.

LCTCS in Louisiana continued to interpret state waiver rules broadly to allow colleges to waive tuition for AO students. In addition, the state office disbursed funds from its $10 million annual Workforce Training Rapid Response Fund and funds from the state's WIA incentive award to help support AO operational costs. LCTCS also made large strides to identify new state funding sources. LCTCS negotiated a $1 million investment in workforce training with JP Morgan Chase, which was matched 4:1 by the state to total a $5 million infusion into workforce training programs. The state match came from the new Workforce and Innovation for a Stronger Economy (WISE) fund. Created by the Louisiana legislature in the second year of AO, WISE provides $40,000,000 annually for "funding degree and certificate production and research priorities in high demand fields through programs offered by Louisiana's public postsecondary education institutions to meet the state's future workforce and innovation needs" (Louisiana HB 1033).

Finally, AO state teams, especially in Illinois, Kentucky, and Louisiana, have encouraged colleges to tap into other, aligned grant initiatives, such as TAACCCT and HPOG, in order to help support student tuition and other needs. Many colleges in these states have funded success coaches or transition coordinators through these resources, particularly TAACCCT.

Data Improvement

States reported making some improvements in data systems. Illinois state stakeholders reported that data alignment between CTE and adult education systems improved as a result of AO. Kentucky strengthened its P-20 warehouse, which connects data from various systems, including education and workforce. Louisiana completed its transition to BANNER and began to implement a new, custom adult education system that will allow for more flexibility in recording adult education student progress. According to the second-year survey, these data changes seem to have trickled down to almost a third of the colleges across the states; 29 percent reporting changing or improving data systems. The most common college data improvement was the inclusion of additional data fields.

Scale and Sustainability

States have been working to devise strategies to scale and sustain the AO model since the beginning of the initiative. In the second year, three states brought additional colleges onto the project, and the total numbers of available pathways and students served increased. In addition to a 21 percent increase in the number of students admitted in the second year, many colleges continued to serve students in the second year who enrolled in the first year. States also worked with AO colleges to understand what elements of the initiative worked well and where there may be room for improvement. States started planning for how to continue AO, or at least components of the model, after the grant funding expires.

Scaling AO across States

As of the end of the second year of implementation, 40 colleges were engaged in the initiative. In the second year, Illinois brought in three additional colleges to participate in AO. In Kansas, the total number of colleges in AO did not change; one college left and another came on. However, the state plans to scale further to the 26 community and technical colleges in the KBOR system as part of the next stage of AO, dubbed AO-K 2.0, with the new funding streams facilitating the participation of new colleges. Kentucky always planned to include all 16 KCTCS colleges in the initiative. The first eight colleges, referred to as "phase 1 colleges," began implementing at the start of the grant. As of the end of 2013, the remaining eight colleges in the KCTCS system were either planning for or implementing AO. Louisiana has not brought new colleges officially into AO, but the state office disbursed seed funds to the four colleges not initially involved in AO to spur the development of AO-like career pathways.

Strategic Planning and Sustainability

Though states are looking forward to understanding the ultimate impacts of the initiative, site visits indicated general agreement in sustaining most of the work that has been achieved through the initiative. Most state stakeholders reported observing positive changes for adult education students in their states and increased collaboration between adult education instructors and CTE faculty. Also, state stakeholders noted the opportunities to integrate AO work into policy efforts and initiatives, and they have initiated planning efforts in the second year.

In Illinois, the 2009 adult education strategic plan is due for a revision in 2015, and ICCB staff reported that they intend to include integrated instruction, bridge programming, and more

collaboration with CTE as centerpieces of the revised plan. In addition, ICCB worked with the colleges participating in AO to develop a proposal for round four of TAACCCT grants. The focus of the proposal was on continuing the work of AO career pathways in manufacturing, health care, transportation, and information technology.[12]

Similar to Illinois, Kansas has considered the AO initiative a permanent part of its operations to move more young adults into the workforce. Kansas made progress in the third year of the initiative to institutionalize the AO model though legislative action. This report does not discuss this legislative success in detail because it occurred after the second year. In sum, through the appropriations process, the Kansas legislature approved nearly $14 million to support AO and career pathways, $12 million for student tuition, and $1.9 million as incentive funds to colleges that transition adults without secondary school credentials into CTE. The state team has also convened work groups to plan for implementation of AO-K 2.0 once the initial initiative funding ends. Although details are still being discussed, state team members reported that they do not expect AO-K 2.0 to differ dramatically from the AO model currently operating in the state, and the decision to join AO-K 2.0 will be left up to the colleges.

In Kentucky, the AO executive team has formed a group composed of local- and state-level AO staff to determine what AO will look like after the grant ends. The process so far has entailed taking into account Kentucky's context and needs as well as examining what has worked well for the initiative and what could be improved.

Louisiana has provided seed grants to the four colleges not initially involved in AO to encourage them to create AO-like pathways. The state team also made co-enrollment, team teaching, and comprehensive support services into a cornerstone of LCTCS professional development moving forward, branding the new approach "Train to Attain."

Finally, all the state teams emphasized that plans moving forward will need to take into account the local context and needs as well as the availability of funds to support programming. Each state is also examining which aspects of the initiative, such as team teaching or the navigator role, have been particularly well-received to help inform upcoming strategic plans.

Findings: Progress toward AO Goals

The first two years of AO have represented a period of growth and change for the states and colleges. The states built upon their first-year efforts and expanded their capacity to serve increasing numbers of AO students by bringing additional colleges into the initiative, offering more pathways, serving more students, awarding more credits and credentials, and helping place students into jobs. Moreover, states began strategic planning efforts and executed policy changes to help sustain the AO model beyond initiative grant funding.

Across the four states, highlights of the second year include the following:

- Seven new colleges joined AO, increasing the number participating from **34** to **40**.
- The cumulative number of students served increased from **2,370** to **5,244**.
- The number of unique pathways offered increased from **89** to **120**, including pathways added by the new colleges.
- Colleges awarded a total of **6,248** credentials and **35,514** credits to AO students, increasing from **2,589** credentials and **12,716** credits awarded in the first year.
- In all, **1,629** AO students found employment, and **84 percent** of their jobs were related to their AO training field.

While not measures of the impact of AO, these are notable accomplishments for AO students. Later reports will determine what proportion of these achievements can be attributed to AO.

States and colleges continued to encounter challenges related to the recruitment and enrollment of students without high school diplomas or GEDs as well as uncertainty about the financing and the sustainability of the initiative once the grant period ends. Recruiting students without high school diplomas or GEDs remained difficult, partly because of the Pell Grant provisions limiting aid to those with a high school credential. Throughout the second year, states worked with colleges on braiding funds and developing new funding models to address challenges with financing and sustaining AO.

This section summarizes the major implementation findings from the second year of AO and the progress of states in implementing the AO model linked to the theory of change. Underlying the AO theory of change is an array of activities that constitute the AO model, the stakeholders and levers that are intended to influence it, and the short-term and long-term outcomes and goals to be achieved over

four years. This summary focuses on second-year goals highlighted in the theory of change, which is included in appendix A.

Progress toward Outcomes: Theory of Change

Table 10 provides an overview of progress related to the two-year outcomes identified in the AO theory of change. Three core areas provide the foundation for the theory of change: college and career pathways, cultural shift, and scale and sustainability. The table indicates each state's progress against the milestones outlined in the theory of change, based on analysis of its survey responses, data collected during site visits, quarterly calls, and document reviews during the first and second implementation years. The table demonstrates significant observable progress toward each two-year outcome for each core activity area in each state. Some outcomes show limited or no progress based on data collected to date. The analysis of additional data drawn from the participant survey and impact analysis will yield a more complete picture of AO progress by state. A black circle indicates strong progress, a gray circle indicates partial progress, and an empty circle indicates limited or no progress. The next several sections explain and justify the ratings given for each item.

College and Career Pathways

TWO VIABLE I-BEST OR I-BEST-LIKE PATHWAYS PER PARTICIPATING COLLEGE

By the end of the second year, AO colleges should have implemented at least two evidence-based integrated career pathways that provide comprehensive supports to help students attain credentials in high-demand fields. States and colleges, for the most part, achieved this goal. In the second year, all colleges, except one in Kentucky, offered at least two career pathways with an initial phase of about 12 credits. As noted previously, the nature and intensity of student supports varied substantially across colleges and pathways.

TABLE 10

Observed Progress toward Two-Year AO Outcomes as of the End of the Second Year of Implementation

Outcome	Illinois	Kansas	Kentucky	Louisiana
College and career pathways				
Two viable I-BEST or I-BEST-like pathways per participating college	●	●	◉	●
Multiple faculty members per college willing and able to deliver integrated curriculum to ABE students	●	●	●	●
Implementation reflects emerging evidence and innovation	◉	◉	◉	◉
Employers actively engage with colleges on pathway development	●	◉	◉	●
Culture shift				
Growing awareness of problem/solutions by colleges, employers, and states	●	●	●	●
ABE students seen as important population/ pipeline in institutions	●	◉	◉	◉
Greater ABE student access to campus resources	●	●	●	◉
ABE students seek college and career pathways	*N/A*	*N/A*	*N/A*	*N/A*
States, colleges invest in ABE data tracking	●	○	●	●
Scale and sustainability				
Some financial aid barriers removed; successfully using models for ABE students to access Pell Grants	◉	●	◉	●
Colleges and students gain access to untapped state, federal, and employer funding to support pathways	◉	◉	◉	●
Capacity, tools, and data are available in states and colleges to conduct cost-benefit analysis	○	◉	◉	○
Colleges and states have greater capacity to track ABE student progress/outcomes and to link data to labor market	●	◉	●	●

● = strong progress ◉ = partial progress ○ = limited or no progress N/A=data not available from implementation study

Sources: AO college survey, site visits, and program documents.

ABE = adult basic education; called "adult education" in the text to include English language learners.

MULTIPLE FACULTY MEMBERS PER COLLEGE WILLING AND ABLE TO DELIVER INTEGRATED CURRICULUM TO ABE STUDENTS

As colleges have added or reformed pathways, more CTE faculty have been introduced to and trained on the concepts of team teaching. All states have developed professional development resources to

train more instructors on the concept. Moreover, according to site visit interviews, these efforts have increased buy-in from CTE faculty and staff. The survey results show that every college has multiple CTE faculty engaged in team teaching and at least one adult education instructor.

IMPLEMENTATION REFLECTS EMERGING EVIDENCE AND INNOVATION

States and colleges have tailored their programs to emerging evidence and innovation, from their own experiences and through cross-site learning facilitated by JFF. An example of a state-led effort to share knowledge for program development is the Kansas state team's convening of representatives from AO colleges on committees charged with identifying best practices in several key areas. The findings from this effort will inform AO-K 2.0. However, the states and colleges had not fully integrated the lessons from the evidence of more or less effective approaches to serving AO students as of the end of the second year.

EMPLOYERS ACTIVELY ENGAGE WITH COLLEGES ON PATHWAY DEVELOPMENT

During the second year, colleges across the initiative continued to strengthen employer relationships. During site visits, colleges indicated that compared with the first year, they had made labor market demand a greater priority when developing or strengthening pathways. According to survey data, 62 percent of colleges reported working with at least one employer partner to inform and support the implementation of career pathway programs. Survey data also indicate that colleges engaged employers in various ways; the two most common were the hiring of AO students and other interactions with students, such as job shadowing. Surveyed colleges reported that 31 percent of employer partners gave input on pathway development in the second year, most commonly in Louisiana and Illinois. Employer engagement in pathway development may have been greater in the first year when colleges were first developing pathways, but the data were not collected to assess this possibility.

Culture Shift

GROWING AWARENESS OF PROBLEM/SOLUTIONS BY COLLEGES, EMPLOYERS, AND STATES

The two-year culture shift outcomes include an increased awareness of the needs of adult education students by multiple stakeholders, including colleges, employers, and the state. Overall, college and state stakeholders recognized the added value of AO. Some students in focus groups expressed that the program had given them an opportunity to access postsecondary education when they might have not otherwise been able to do so. The growth of collaboration between various state agencies to increase

adult education student access in Kansas and Kentucky and the new state funding and professional development structures in Louisiana show an awareness of the issue and a willingness to work toward solutions together. In Illinois, this growing awareness of the needs of adult education students is apparent in the strategic direction of ICCB, which is emphasizing stronger ties between CTE and adult education departments as well as more direct focus on workforce outcomes for adult education students.

ABE STUDENTS SEEN AS IMPORTANT POPULATION/PIPELINE IN INSTITUTIONS

Despite an awareness and willingness to open doors for adult education students, states and colleges did note that recruiting students without high school credentials continued to be a challenge. During the second year, all states encouraged their colleges to support adult education students with funding alternatives to Pell Grants, such as WIA and TANF. Yet, colleges in Kansas and Kentucky still largely recruited from the existing CTE and developmental education pool, which are mostly students with secondary school credentials.

Louisiana still has progress to make on this measure because, while AO programs successfully recruited from the adult education population, site visits revealed that administrators at several colleges did not fully recognize the role of adult education in supporting institutional goals. The challenge in Louisiana may stem from the provision of adult education by the school districts or the recent transition of adult education to LCTCS. Though adult education is administered by LCTCS as part of WorkReady U, in many parts of the state the school districts continue to provide adult education services. In some cases, even with collaboration on AO, this makes it more difficult for colleges to appreciate the potential of adult education students within their institutions.

GREATER ABE STUDENT ACCESS TO CAMPUS RESOURCES

Though in some states there were relatively few adult education students in the initiative, the data and site visits suggest that the adult education students who entered AO did have enhanced access to resources on all campuses in Illinois, Kansas, and Kentucky. There is still a secondary status for AO students in the Louisiana college that does not offer AO courses for credit.

ABE STUDENTS SEEK COLLEGE AND CAREER PATHWAYS

It is not possible to determine whether adult education students are actively seeking college and career pathways relative to what they would have done otherwise. The student-level records may further illuminate this issue.

STATES, COLLEGES INVEST IN ABE DATA TRACKING

Illinois, Kentucky, and Louisiana continued their efforts from the first year to strengthen adult education data collection, particularly around links between different data systems and adoption of new systems. Kansas already collected data on this population, but did not make notable efforts to change or improve their system. The Kansas and Kentucky state teams have utilized their data to complete preliminary analysis of the impacts of AO and the return on investment.

Scale and Sustainability

SOME FINANCIAL AID BARRIERS REMOVED; SUCCESSFULLY USING MODELS FOR ABE STUDENTS TO ACCESS PELL GRANTS

Despite the fact that financing student tuition in the absence of Pell continued to be a challenge, states and colleges found untapped resources to help address the barrier, particularly in Kansas and Louisiana. Kansas made TANF funding available to colleges to support adult education students' tuition. Louisiana interpreted state rules broadly to allow for tuition waivers, provided state rapid response funds and WIA incentive money to support AO operational costs, and leveraged the WISE funds from the legislature to support AO student tuition. The Illinois, Kentucky, and Louisiana state teams continued to encourage colleges to tap into similar grant initiatives, such as TAACCCT and HPOG, to help support students' participation.

COLLEGES AND STUDENTS GAIN ACCESS TO UNTAPPED STATE, FEDERAL, AND EMPLOYER FUNDING TO SUPPORT PATHWAYS

The focus of the scale and sustainability goals in the second year was on strategic planning and financing changes that could support the growth of the AO model, particularly after the initiative ends. Overall, since the first year of implementation, the states made measurable progress in attracting resources for AO. In fact, exploring new funding models to finance and sustain the AO initiative was perhaps the most important priority for all states in the second year. Louisiana was the most successful in identifying resources to support pathway development and ongoing operations. Kansas sought legislative appropriations that would support AO program costs going forward, but these had not been approved as of the end of the second grant year.

CAPACITY, TOOLS, AND DATA ARE AVAILABLE IN STATES AND COLLEGES TO CONDUCT COST-BENEFIT ANALYSIS

Kansas and Kentucky began to develop capacity to complete cost-benefit analysis through efforts to measure return on investment and think about how to capture program costs in a way that aligned with state policy needs. The other two states did not make notable progress on measuring program costs or benefits.

COLLEGES AND STATES HAVE GREATER CAPACITY TO TRACK ABE STUDENT PROGRESS/OUTCOMES AND TO LINK DATA TO LABOR MARKET

In addition to state data changes already discussed, colleges also made data improvements. Seventy-seven percent of the 26 colleges that considered student tracking a challenge in the first year reported that it was somewhat or fully resolved during the second year. In addition, 29 percent of colleges reported data improvements that included additional data fields, additional performance measures, and data linkages to other systems in college.

Summary

During the second year of the initiative, states and colleges focused on building upon their first year efforts. They also had an opportunity to reflect and make strategic decisions on how the AO model could match the needs of their students, their individual institutions, and their local labor markets. By the end of the second year, 40 of the 41 colleges in the initiative had developed at least two career pathways with an initial phase of about 12 credits that used integrated instruction and team teaching methods. Colleges approached the incorporation of integrated instruction and team teaching in a pathway's initial phase in various ways, taking into account the students served, the types of classes offered, and the relationship between the CTE instructor and adult education instructor. Findings from the second-year college survey suggest these developments supported positive results, with AO students earning credentials and moving into jobs related to their training. However, upcoming analysis of individual student record data will shed light on whether these outcomes can be attributed to the AO model.

In addition to pathway development and strengthening throughout the second year, states and colleges continued to increase awareness and buy-in around the needs of adult education students. The state AO teams conducted intentional outreach to various state-level stakeholders in order to elevate issues and reform systems that would increase access to postsecondary training for adult education students. Moreover, all states encouraged AO colleges to pay special attention to the recruitment of

adult education students without high school credentials during the second year. Though the data show that the states lost ground in the progress made to bring in more students without high school credentials, several states established funding structures to support tuition for these students going forward.

At the institutional level, AO instructional teams became more comfortable with team teaching approaches, and many CTE instructors became advocates for the approach in their institutions. AO colleges also worked across institutional departments, such as admissions and financial aid, in order to ease implementation of the model and better meet the needs of adult education students.

Finally, in the second year, states and colleges made significant efforts to plan strategically and address the initial challenges identified in the first year around financing the model and recruiting adult education students. Moreover, the states brought seven new colleges into the initiative, and there was a 21 percent increase in the number of students served between the first and second years. However, while states are making plans for sustaining the initiative, uncertainty remains around what the model will look like, whom it will serve, and how it will be financed and sustained after the grant ends.

Future Reports

This report has summarized the second year of AO implementation. Spaulding and Martin-Caughey's (2015) report of AO participant outcomes accompanies this evaluation report. That report examines AO student characteristics and experiences in the program, including their use of support services and receipt of financial assistance, and their satisfaction with the program. The evaluation team will release a report on the impacts of AO on interim student academic outcomes in late 2015. Other future evaluation products include a final report on AO implementation, a report on AO student employment experiences based on a second round survey, a quasi-experimental analysis of AO's impact on student earnings, and a cost-benefit analysis to determine how the social costs of AO compare to its benefits. A final brief will give a high-level summary of findings across all reports.

Appendix A. Required Elements of AO and Theory of Change

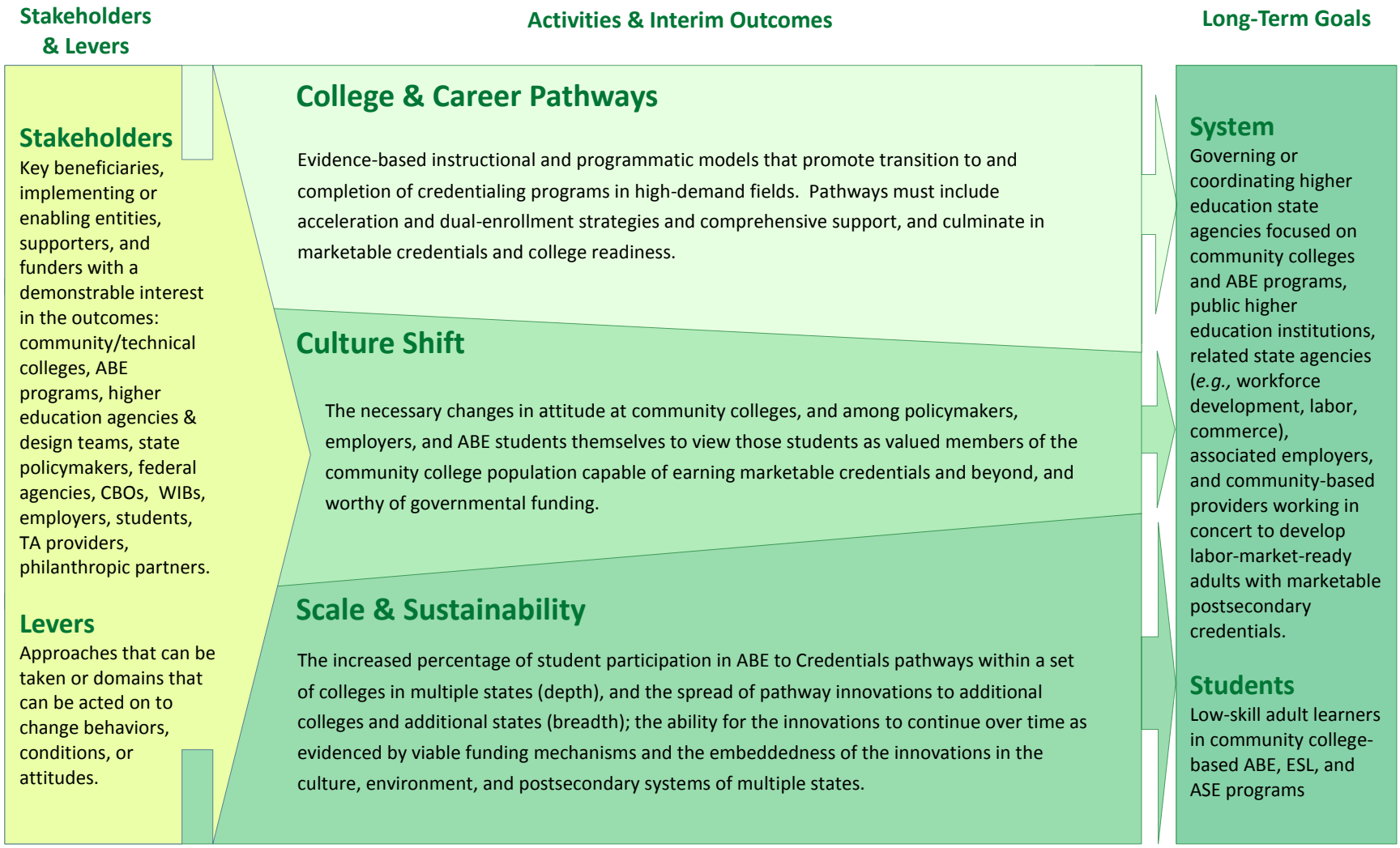
Nonnegotiable Elements of the AO Grant

1. Explicit articulation of two or more educational pathways, linked to career pathways, that begin with adult basic education or ESL and continue to a college-level certificate and beyond;
2. Evidence of strong local demand for the selected pathways, including the presence on the workforce investment board demand list for the local area or other local data demonstrating robust demand;
3. Acceleration strategies, including contextualized learning and the use of hybrid (online and classroom-based) course designs;
4. Evidence-based dual enrollment strategies, including paired courses and I-BEST and I-BEST-like approaches;
5. Comprehensive academic and social student supports (e.g., tutoring, child care, transportation, access to public benefits, subsidized jobs);
6. Achievement of marketable, stackable, credit-bearing certificates and degrees and college readiness, with an explicit goal of bypassing developmental education;
7. Award of some college-level professional-technical credits, which must be transcripted the quarter or semester in which they are earned; and
8. Partnerships with Workforce Investment Boards and employers.

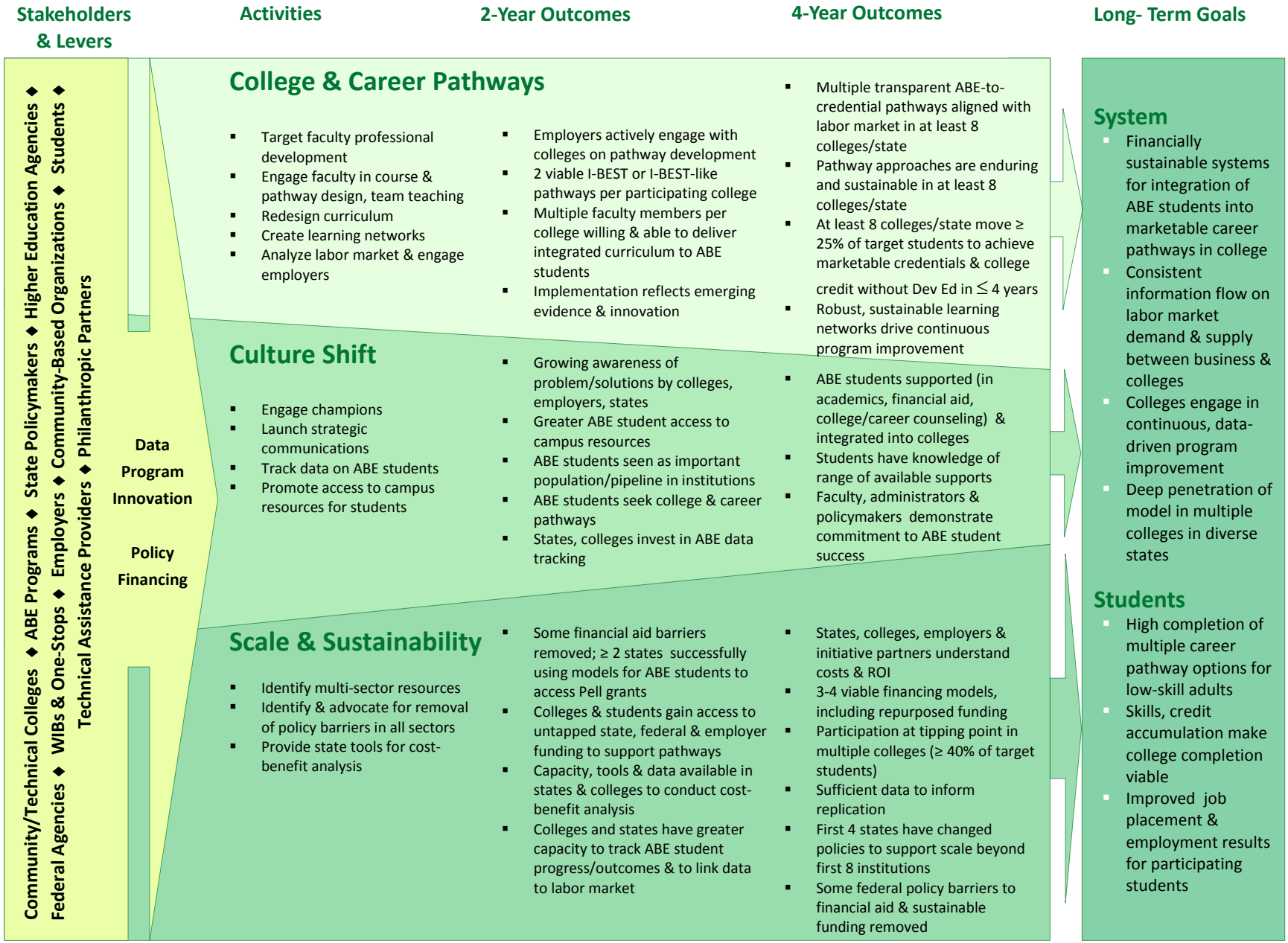
States and colleges are further expected to adhere to the nonnegotiable elements of the model except where infeasible. These elements specify that the states' programs should offer career pathways that are at least 12 credit-hours long, at least two pathways should be established in each of at least eight colleges, and pathways should have at least 25 percent team teaching. Students eligible for AO must fall within National Reporting System (NRS) levels 4–6 (6th- to 12th-grade level) on math, reading, or writing or NRS levels 5–6 in English language skills. Enrolled students may have a secondary school

credential as long as they fall within the eligible skill ranges. States were asked to identify policy levers and are expected to make at least 80 percent progress toward their policy goals by the end of the grant period. The goal is that within three years of operation, each participating state will produce at least 3,600 credentials statewide. Credentials should be offered in industries with sufficient labor demand so students could reasonably become employed within their areas of study.

Accelerating Opportunity Theory of Change – Definitions



Accelerating Opportunity Theory of Change – Path to Impact for System and Students



Appendix B. North Carolina Accomplishments in AO

TABLE 11

North Carolina Indicators in the First Implementation Year

Indicator	Year 1
Colleges involved	8
Unique active pathways	23
Students enrolled	218
Credentials awarded	52
Credits awarded	667
Students placed in work-based learning	7
Students hired into any job	1
Students hired into a job related to training	1

Source: Year 1 AO college survey.

Notes

1. Impacts represent the effect a program had on outcomes; a study of the causal relationship between participation in AO and education and employment outcomes will be part of the final impact report.
2. Author tabulations using the March 2013 Current Population Survey.
3. See US Department of Education (2013).
4. AO is managed by JFF in partnership with the National College Transition Network (NCTN), the National Council for Workforce Education (NCWE), and the State Board for Community and Technical Colleges in Washington State. JFF contracted with the Urban Institute and its partners—the Aspen Institute and the George Washington University—to independently evaluate the initiative.
5. See Mary Clagett and Ray Uhalde, *The Promise of Career Pathways Systems Change* (Boston: JFF, 2012), http://www.jff.org/sites/default/files/publications/CareerPathways_JFF_Paper_060112.pdf; David Fein, *Career Pathways as a Framework for Program Design and Evaluation* (Washington, DC: Office of Planning, Research and Evaluation, Administration for Children and Families, US Department of Health and Human Services 2012), http://www.acf.hhs.gov/sites/default/files/opre/inno_strategies.pdf; and *A Framework for Measure Career Pathways Innovation* (Washington, DC: Center for Law and Social Policy, 2013), http://www.clasp.org/admin/site/publications/files/CLASP-AQCP-Metrics-Feb-2013.pdf.
6. Anderson et al. (2014)—the report on the first year of AO implementation—summarizes the AO model in depth.
7. Much more information about student experiences can be found in Spaulding and Martin-Caughey (2015), which reports on the survey fielded to AO students in spring 2014.
8. The research on I-BEST found that the "tipping point" at which students had an annual earnings advantage after five years was one year's worth of college-credit courses and a credential. See Prince (2005).
9. The number of missing cases can be determined by looking at the *n* values reported under each column (table 2 on page 9 reports the total enrollment in each state and in the program).
10. The population in this figure is entering students in each year, as in the other figures, but Pell grant receipt is indicated if a student received Pell in any semester of that grant year.
11. Federal student aid requires at least 600 clock hours, 16 semester or trimester hours, or 24 quarter hours of undergraduate instruction offered during a minimum of 15 weeks of instruction. For more information, see the Federal Student Aid Handbook (July 2012) at http://ifap.ed.gov/fsahandbook/attachments/1213FSAHbkVol2Ch2.pdf.
12. These findings are not compared side by side with first-year survey results because the concepts were measured somewhat differently, and more precisely, in the second year.
13. In some higher education institutions, overhead is also a substantial cost. However, overhead as such is not considered in this analysis for two reasons. First, overhead often represents an aggregate cost for administrative personnel, space, and supplies, but in this analysis these costs are captured directly. Second, in the context of a community or technical college, few faculty members have their own office space; therefore, overhead is lower overall than in a university setting.
14. The US Department of Labor ultimately did not fund this TAACCCT proposal.

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